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ABSTRACT

Current and future issues concerning Arab higher education are discussed, along with the structure and growth of the economy and the development of general education. Economic data for 21 Arab countries are provided for 1979 that cover the per capita national income; annual rate of growth in national income; and the share of growth by the labor force and by agriculture, industry, manufacturing, and services. Demographic data on population trends and the adult literary ratio are also included for each country. The number of college students and teachers in 1970 and 1978 by country are examined, along with the percentage distribution of college students by type of institution, field of study, and study level in 1978. In addition, enrollment increases for primary, secondary, and college students are projected for 1980-2000. I. is suggested that the Arab higher education system needs to expand research and public service functions. Changes are needed in educational objectives, structures, content, and methods. Greater attention should be paid to scientific and techonological studies, and a wider geographical dispersal of colleges is needed. (SW)

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PERSPECTIVES OF THE DEVELOPMENT OF HIGHER EDUCATION IN THE ARAB REGION FROM THE PRESENT TO YEAR 2000

by

Professor Omer M. Osman

The opinions expressed in the present study are those of its author and do not correspond necessarily to the point of view of Unesco.

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Note from the Secretariat

The present study has been prepared within the framework of the programme of Unesco aiming at deepening the knowledge on the role of higher education in society. Within that framework, certain activities like this study have an exploratory function; they are devoted to the study of some major problems and seek to promote a reflection with a view to clarify the goals and the future role of higher education based on the results of previous activities.

The Secretariat has undertaken a series of prospective studies concerning the development of education from the present to the year 2000. Within this framework, five regional studies are devoted to the evolution of higher education in a perspective of democratization and social progress.

The present study is one among these five studies and deals with the perspectives of development of the universities in the Arab region from now to the year 2000. In the light of the trends recently observed, the author makes a reflection on the probable evolution of the goals and functions of the institutions of higher learning and particularly of the universities, as well as an analysis of certain experiences that have been undertaken by Arab institutions of higher learning - especially the universities - during the last years.

The author identifies what he considers to be the major weaknesses of higher education in the region underlining, at the same time, some of the significant efforts undertaken in order to remedy them. On the basis of a comprehensive analysis of the situation, he concentrates on identifying essential tasks which lie ahead and which converge towards the achievement of democratization, the safeguarding of cultural identity and the urgency of self-reliant socio-economic development to which higher education must contribute. Among other items, the study considers problems having impact on endogenous development such as the size and quality of teaching staff, the service of higher education to the community, the expected role of research in higher learning and the importance of inter-Arab co-operation.

Professor O.M. Osman, former Vice-Chancellor of the University of Khartoum in Sudan, is a scholar who has devoted himself to research work, and this text reflects his studies on problems related to the relationship between higher education and society.

SECTION I - THE GENERAL BACKGROUND

The Arab region, comprising 21 Member States, covers an area of nearly 14 million square kilometres and exhibits a wide range of climatic and physical features. The populations of the region estimated in 1979 at 160 million lack any racial homogeneity as they represent several racial and ethnic groups including the Caucasian, the Berber and the Negro. The region represents a diversity of 21 independent states of varying sizes, in area and population, widely differing socio-political systems and levels of economic development. But in spite of these negative factors which were further intensified by the divisive role of foreign colonialism, the Arab region is not merely a geographical definition of a group of neighbouring countries. It is united by the very powerful unifying forces of the Arabo-Islamic culture and their long and rich shared history extending from the emergence of Islam as a dynamic world religion in the seventh century (A.D.) and the distinguished cultural and scientific contributions which a united Arab nation made to the heritage of man during the subsequent three or four centuries. An intra-regional institutional framework has been gradually developing since the creation of the Arab League in 1945 with the aim of attaining greater co-operation and complementarity in the economic, social and cultural fields. A number of Specialized Agencies, joint ministerial councils and other satellite organizations modelled on the United Nations system were established during the last two decades. Several joint investment institutions and projects were also promoted with a total combined capital of over 23 billion US dollars. This expanding common sector was further strengthened by the emergence of a multitude of non-governmental regional associations of business, professional and trade union groupings, etc.

The structure and growth of the economy

The long chain of foreign domination, starting with the devastating Mongul invasion, which only ended after the Second World War, has wiped out from the region all its earlier cultural and scientific advantages and left all countries of the region in a state of extreme poverty and general social, cultural and economic backwardness. The economies of all countries became primarily, if not entirely, dependent on agriculture with those enjoying relatively adequate rainfall or river irrigation possibilities comparatively better off than others. As nearly 92% of the total area of the region consists of agriculturally unproductive desert or semi-desert arid lands, total cultivable area is estimated at about 110 million hectares, with nearly 90% of this area concentrated in only 9 countries. Actually cultivated area increased steadily during the last three decades to reach 50 million hectares by 1978, still leaving more than half of the total cultivable area unutilized. Due to a combination of economic, social and technological factors agricultural productivity continued to be low. But some distinct improvement was achieved during recent years as a result of investment of more capital mainly in irrigation and mechanization and more use of fertilizers and insecticides. Steady improvements in general social conditions, mainly the spread of education, better wealth care and agricultural extension services, naturally had a positive impact. But most of these improvements in agriculture were directed mainly to the production of the more valuable cash crops, leaving the region still heavily dependent on imports for food products. Therefore, much remains to be done if the region is to achieve self-sufficiency in agricultural production and especially food production. Considerable capital investment will be needed for the utilization of the remaining cultivable areas, for more intensification of land use and for general modernization through further improvements in the land tenure systems and the adoption of more efficient techniques, including mechanization.

Although agricultural production continued to grow rapidly in absolute terms during the last decade, its relative share in total production began to decline fairly rapidly due to the much higher rate of growth of other sectors, mainly the rapid increase in the production and world prices of oil and the acceleration of the shift to manufacturing, construction and services sectors. For example, while total contribution of agriculture increased threefold in the 1970s, its relative share in the gross domestic product declined from 16% to 7%. Manufacturing increased fourfold but its share declined from 13.5% to 7.5% during the same period while the contribution of the services sector increased more than fivefold and its relative share declined from 40% to 29%. All these indicators show the dominant role which came to be played by the 'mining and quarrying' (mainly oil) sector which increased its contribution nearly fifteenfold and also increased its relative share from 25% to 48% of the value of the total production of the region. The share of the construction sector also increased both in absolute terms, more than twelvefold, and in relative terms from 5.5% to 9%.

The present structures of the national economies of the 21 countries of the region, their rates of growth and some relevant demographic data are provided in Tables 1 and 2. All countries are listed in the ascending order of their per capita national income (GDP) in 1979 and are accordingly grouped in three groups, each consisting of seven countries. The top income group with per capita income ranging from nearly $3,000 to $17,000 had an average per capita income of $9,440 for the whole group. The middle income group with per capita income ranging from 780 to $2,400 had an average income of $1,280. For the lowest income group, per capita income ranged between $270 and $480 and the overall average for the group stood at $412. The extent of the wide disparity in the distribution of income among the countries of the region is strikingly illustrated by the fact that the first group with less than 10% of the total population has 54% of the combined national income of the region.

Although the grouping of the countries of the region is based on the wide differences in the per capita income, it seems to be equally justified by certain similarities in the structures of the economies of each group. The first group of countries have the common feature of almost complete dependence on the production and export of oil. Due to the increase in the production and world prices of oil in the 1970s the contribution of 'mining and quarrying' to the economies of this group increased twentyfold while its relative share increased from 44% to 63%. Agriculture plays an insignificant role in this group of countries, its share actually declining from 3% to only 1%. Almost all countries of this group have in recent years paid more attention to the diversification of their economies through investment in the manufacturing sector mainly in oil refining and petrochemical industries.

The middle income group of countries differ from the other two groups in that their economies are relatively more diversified. Although oil plays a dominant role in two countries and a lesser role in two others, their dependence on oil is much less than in the case of the first group. The combined income of this group increased during the 1970s by more than fivefold with the 'mining and quarrying' sector increasing 15 times and agriculture 3.5 times. The relative share of mining increased from 13% to 33% and that of agriculture declined from 16% to 10%. However, the contribution of agriculture remains substantial as it accounts for nearly 46% of the total agricultural production of the whole region. Also, this group accounted for more than half the value of the manufacturing output of the region.

The third group of countries consists of the poorest and generally the least developed countries of the region. With the exception of Egypt where oil production and manufacturing play some significant role, the economies of this groups are much less diversified and are generally excessively dependent on agriculture and related primary activities. Agricultural production of this group increased in

TABLE 1 - BASIC ECONOMIC DATA 1979

COUNTRY	GDP in Millions of Dollars	Per Capita GDP US$	Annual R. of Growth of GDP		% Share in 1979 GDP[1]				1979 % Share of Labour Force in:-		
			1960-1970 %	1970-1979 %	AGR %	IND %	MAN %	SER %	AG %	IND %	SER %
KUWAIT	23300	17000	5.7	2.0	-	81	5	19	2	34	64
QATAR	3340	16670	-	-	2	85	2	13	-	-	-
U.A.E.	12500	15590	-	-	1	74	5	25	-	-	-
LIBYA	24570	8170	24.4	1.9	2	73	3	25	20	27	53
S ARABIA	74060	7280	-	11.9	1	74	5	25	62	14	24
BAHRAIN	2110	5270	-	-	1	55	13	41	-	-	-
OMAN	2670	2970	-	-	3	72	2	25	-	-	-
S TOTAL	142550	9440	-	-	-	-	-	-	-	-	-
IRAQ	30710	2410	6.1	10.5	8	73	6	19	43	26	31
ALGIERS	29810	1590	4.6	5.8	7	58	11	35	32	24	44
LEBANON	(2520)	-	4.9	-	9	21	16	70	12	26	62
JORDAN	1870	1180	-	-	8	32	16	60	21	19	60
TUNISIA	3420	1120	4.7	7.6	31	24	16	45	35	32	33
SYRIA	9110	1030	5.7	9.0	16	22	-	62	32	31	37
MOROCCO	14960	780	4.2	6.1	19	32	17	49	53	21	26
S TOTAL	92420	1276	-	-	-	-	-	-	-	-	-
YEMEN (PDR)	520	480	-	-	13	26	11	61	47	15	38
EGYPT	17050	480	4.2	7.6	23	35	28	42	50	29	21
YEMEN (AR)	2910	420	-	8.4	32	28	5	44	76	11	13
DJIBUTI	125	420	-	-	4	18	8	78	-	-	-
SUDAN	7640	370	1.3	4.3	38	13	6	49	78	10	12
MAURITANIA	470	320	-	1.8	27	33	8	40	85	5	10
SOMALIA	1030	271	1.0	3.1	60	11	7	29	84	8	8
S TOTAL	29740	412	-	-	-	-	-	-	-	-	-
	264690	1657	-	-	-	-	-	-	-	-	-

Source: 'World Bank Development Report 1981

1. Industry includes 'Mining and Manufacuring'

TABLE 2 - DEMOGRAPHIC DATA 1979

COUNTRY	Area (000) Km 2	Popn in Million Pers.	Density persons per Km 2	Av. Annual R. of G. Population		1979 % of Work Popn in total popn	Urban Population		Adult Literary Ratio	
				1960/ 70 %	1970/ 79 %		as % of pop 1980	Rate of G 1970 /80	1970 %	1980 %
KUWAIT	18	1.3	72	9.8	6.0	52	88	7.4	55	63
QATAR	11	0.2	18	-	-	-	-	-	-	20
U.A.E.	84	2.8	9.5	-	-	-	-	-	20	42
LIBYA	1760	2.9	1.6	8.8	4.1	51	52	8.3	33	58
S ARABIA	2150	8.6	4	3.4	4.5	52	67	7.6	8	16
BAHRAIN	1	0.4	400	-	-	-	-	-	40	55
OMAN	212	0.9	4.2	-	-	-	-	-	5	17
S. Total	4336	15.1	3.6	-	-	-	-	-	-	-
IRAQ	435	12.8	29	3.1	3.3	51	72	5.4	31	43
ALGIERS	2382	19.1	8	2.8	3.3	49	44	5.8	24	42
LEBANON	10	3.1	210	2.8	0.6	55	76	2.8	62	76
JORDAN	98	3.1	31.6	3.0	3.4	51	56	4.7	42	58
TUNISIA	164	6.2	38	1.9	2.1	55	52	3.9	32	49
SYRIA	185	8.6	46	3.2	3.6	48	50	5.0	40	55
MOROCCO	447	19.5	44	2.5	2.9	50	41	4.6	21	26
S. Total	3721	72.4	19	-	-	-	-	-	-	-
YEMEN PDR	333	1.9	5.7	1.9	2.3	51	37	3.7	26	39
EGYPT	1001	40.9	41	2.2	2.0	57	45	2.8	43	54
YEMEN (AR)	195	5.8	30	1.8	1.8	51	10	7.2	9	17
DJIBUTI	22	0.3	13.6	-	-	-	-	-	-	-
SUDAN	2506	17.9	7.1	2.2	2.6	53	25	6.8	15	22
MAURIT.	1031	1.6	1.6	2.5	2.7	52	25	8.6	9	17
SOMALIA	68	3.8	10	2.4	2.3	54	30	5.0	4	5
S. Total	5726	72.2	12.6	-	-	-	-	-	-	-
G. TOTAL	13683	159.7	11.7	-	-	-	-	-	-	-

Source: World Bank 'World Bank Development Report' 1981
Unesco Yearbook 1980

the 1970s more than threefold but its relative share declined from 32% to 30% of the total output of the group and from 50% to 46% of total agricultural output of the whole region. Although a gradual shift began in these countries towards industrialization in recent years it is still moving at a much slower pace, with the exception of Egypt, than in the other two groups.

Weakness in the socio-economic structure

What has been achieved by the region during the last two decades was economic growth, rapidly in a few Arab countries and more modestly in others. It was not economic development which requires the increase in production to be preceded or at least accompanied by certain basic and sustained changes in the technological, social and political framework and not merely in the economic framework. Hence, although several Arab oil-producing countries have achieved higher per capita income than most, if not all, of the advanced industrialized countries, they are still firmly classified as Third World developing countries. The whole region and all individual countries are still victims of a wide range of weakness in their socio-economic structures which must be tackled with due determination in the coming two decades, if the gains of the past few decades are to be consolidated and, furthermore, real progress is to be made.

A major weakness which is closely related to the performance of the education system is the weakness of the technological capacity of the region and the under-utilization of the existing capacity. While the insufficiency of funds directed to reasearch and the generally unfavourable socio-economic structures and socio-cultural milieu are important limiting factors, the main obstacle is the shortage of qualified personnel. Neither the total numbers of scientists, researchers, technicians and skilled labourers are sufficient in the region, nor is their general quality of sufficient merit; which is a reflection on the general and higher education systems of the region. This problem is further accentuated by the 'brain drain' which robs the region, especially the poorer and less developed countries, of their best qualified personnel.

Another weakness in the economic structure is the dependence, and, in most countries, over-dependence on one or a few products. Although all countries of the region have begun to pay more attention to the need to widen the base of their economies, only a few countries, mainly in the middle income group, have achieved some success. Therefore, the region as a whole continues to be basically unstable. The situation is particularly grave and almost precarious in the case of the oil-producing countries whose dependence on oil varies between 60% and 85% of their gross domestic product and almost 100% of their exports. The rapid growth in their income during the last decade or two was not due to any inherent development or improvement in the productive capacity of the oil sector or the society at large, but primarily due to nature of oil as a strategic and essential resource which they have tended to produce in excessive quantities and exchange for financial assets. Although the increase in the contribution of oil was partly due to the increase in the share of national governments in the proceeds of oil and to their control of the oil sector, the general impact of oil sector on general development is limited by a number of factors. Chief among these is its capital-intensive nature, its self-sufficiency and isolation from the rest of the economy reducing the need to provide overhead capital which could benefit other sectors of the economy. Also the relatively low levels of social and economic development in the surrounding areas increases the oil sectors' dependence on imported inputs including skills and hinders its integration with the local economies and the utilization of its by-products.

To remedy this situation, oil-producing countries began efforts to diversify their economies by shifting from exporting oil in the crude form to refining and to the development of petrochemical industries and other services associated

with the hydrocarbon industry. The main weakness of this remedy is that it still keeps these economies dependent on oil which is a perishable non-replaceable asset. What is needed is converting the oil wealth into other forms of real wealth in other fields of agriculture and industry and through financing general socio-economic development in the whole region.

Another weakness in the socio-economic structure is the failure to increase employment opportunities in the region, commensurate with the increase in investment and national income. This is mainly due to the capital intensive nature of most of the investment and its sectoral and geographical concentration. It has been estimated that the number of adults who are involuntarily unemployed in the whole region is nearly 15 million because the development process has failed to absorb them in gainful employment.[1] This is in spite of the fact that the size of the labour force is substantially reduced by the high dependency ratio resulting from the fact that 55% of the total population is in the under-20 year age-group and the attitude towards female employment. However, side by side with this level of unemployment, exists an acute shortage of manpower not only within some individual countries but for the region as a whole. The main cause of this shortage is that the unemployed are short of skills and/or a minimum level of functional literacy. As a result, some three million Arabs have moved across national frontiers in search of employment while several hundred thousands of non-Arab labourers have been imported from far-away lands, mainly by the Gulf oil-producing countries.[1]

Related to these problems of imbalances in the employment situation are a host of other problems caused by the geographical and sectoral concentration of investment and neglect of the spread of development to wider, especially rural areas. This has invariably led to the proliferation of a wide range of secondary activities attracted by the higher levels of income prevailing in these new centres. Therefore, without becoming centres of development, these new areas have posed many problems as they tended to attract and absorb by themselves the region's economic substance, human resources and administrative resources. An excessive rate of urbanization has become a common feature of all countries of the region as indicated in Table 2, creating problems of infrastructure and misdirecting investment of scarce resources from more productive and more deserving sectors. As a consequence of this state of affairs, the services sector has become overdeveloped as seen from Table 1, growing faster than other sectors and accounting for the highest proportion of national income, while absorbing a much smaller proportion of the labour force.

The development of general education

The whole region suffered from the neglect of education during the many centuries of foreign domination, to the extent that even the Arab language, which has always been held in great reverence in all countries of the region came to be mastered by relatively few. The concern about the restrictive attitude of European colonialism towards education was so widespread that in almost all countries national liberation movements began as voluntary popular associations for the building and management of schools. It was therefore natural that on attaining national independence all countries accorded very high priorities to education.

The improvements in economic performance of the last two decades made educational development both feasible and essential as more resources became available and at the same time demand for a wide range of skills increased. The pressure to accelerate educational development came to be intensified with the growing realization of the close link, and indeed interdependence, between educational development and general economic, social, political and cultural development, not merely through increasing the supply of skills but as an essential condition for the involvement of a larger section of the population in the development process.

1. Dr Yusif A. Sayigh, 'Arab Economy', page 111.

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During the earlier years, efforts were directed primarily to quantitative expansion within the limits of available resources and little attention was paid to consideration of quality. But as more resources became available, quantitative growth came to be accompanied by some improvements in quality. As shown in Table 4, total student enrolments in all three levels almost doubled in the 1960s decade from 8.6 million to 16.2 million and almost doubled again in the 1970s to 31.4 million. The average annual rates of growth were not naturally the same for all levels as illustrated in the following table:

Period	Average Annual Rate of Growth of Enrolments			
	Primary	Secondary	Tertiary	Total
1965-1970	4.4%	8.7%	8.5%	5.3%
1970-1978	5.1%	9.8%	12.4%	6.5%

A significant development during the last two decades was the steady, although somewhat slow, improvement in female participation in all levels of education, as their share in total enrolments increased from 32% in 1960 to 38% in 1978. The number of teachers also increased in all levels faster than the rate of increase in number of students, thereby, leading to a steady decline in the overall student/teacher ratio from 30 in 1970 to 23 in 1978.

However, in spite of these rapid rates of expansion and other improvements, the region as a whole is still far from providing sufficient facilities for all school-age boys and girls. For the region as a whole, the gross enrolment ratio for the 6-11 age group was only 68% (77% for boys and 58% for girls) in 1978. For the 12-17 age group the ration was in the same year only 45% (46% for boys and 44% for girls). Compared with other Third World countries, the performance of the Arab region was slightly better than that of the non-Arab African group of countries, but distinctly lower than the performance of the non-Arab Asian countries and the Latin American countries.

TABLE 3 - POPULATION BY EDUCATION AGE GROUPS FOR THE WHOLE REGION (1970-2000) IN (000,000)

Year	6-11 Age Group			12-17 Age Group			18-23 Age Group			Total 6-23 Group			Total Popln
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	
1970	10.8	10.4	21.2	8.7	8.3	17.0	6.9	6.6	13.5	26.4	25.3	51.7	118
1975	12.3	11.9	24.2	10.1	9.8	19.9	8.2	7.8	16.0	20.6	29.5	60.1	135
1980	14.1	13.6	27.7	11.9	11.5	23.4	9.8	9.4	19.2	35.8	34.5	70.3	164
1990	18.6	17.9	36.5	15.3	14.7	30.0	12.7	12.2	24.9	46.6	44.8	91.4	220
2000	23.5	22.6	46.1	19.8	19.0	38.8	16.5	15.9	32.4	59.8	57.5	117.3	286

Source: Unesco Regional Office of Education in Arab States

'Statistical and Socio-Economic Indicators in the Arab States' 1980

TABLE 4 - TOTAL STUDENT ENROLMENTS AND TEACHERS IN ALL LEVELS (1960-2000)

Year	No. of Students in millions				Female Ratio %	Gross enrolment ratio			No. of Teachers (000)				Overall Student/staff ratio %
	P	S	T	Total		P %	S %	T %	P	S	T	Total	
1960	7.2	1.2	0.16	8.6	32	50	9.3	2.3	188	69	-	-	-
1970	12.3	3.5	0.4	16.2	35	58	21	3.3	363	161	25	549	30
1975	16.5	5.6	0.87	22.8	37	67	27	4.8	509	255	45	808	28
1978	17.6	7.5	1.13	26.2	38	-	-	-	807	336	56	1199	23
1980	21.7	8.4	1.3	31.4	39	78	36	6.9	975	379	68	1412	22
1990	32.2	13.7	3.0	48.9	47	88	46	11.9	1356	695	149	2200	22
2000	41.6	19.5	6.2	67.3	51	90	50	19.1	2270	1221	344	3835	19

Source: Unesco Yearbook 1980

Unesco Regional Office for Education in Arab States
'Statistics and Socio-Economic Indicators' 1980

P = Primary Level; S = Secondary Level; T = Tertiary Level

A breakdown of enrolment figures and ratios by individual Arab countries is given in Table 5. The most striking feature revealed by these figures is again the wide disparity among individual countries in the pace of expansion during the last decade and in the levels reached by 1980, reflecting very closely the disparity in the rates of economic growth and in the per capita national income. The higher income and middle income groups succeeded in expanding their total primary-level enrolment much faster and by 1980 came very close to achieving universal primary education. The third group of countries, in spite of commendable efforts, have trailed far behind the other two groups and are still a long way from reaching the target of universalization of the primary level. As for the expansion of the secondary level, the situation is much less encouraging as only six countries, three in the top income group and three in the middle income group have reached or just exceeded the 50% gross enrolment ratio. But again the two higher income groups have generally done much better than the lower income group.

As an overall general indicator of education progress, the adult literacy ratio for the over-15 year age group, as presented in Table 2 reveals considerable improvements in most countries of the region, but with very wide disparities among individual countries. It is interesting that the middle income group has so far achieved better levels of literacy ratios than the higher income group due to their earlier start in educational development. But for the region as a whole the general performance is still very unsatisfactory with more than 50% of the adult population remaining completely illiterate. The performance of almost all individual Arab countries is on the whole much below that of other Third World countries with comparable levels of per capita income. Also several Arab countries including three countries in the top income group have 20% or less literacy ratios, which places them among the lowest in the whole world.

TABLE 5 - TOTAL ENROLMENTS AND RATIOS FOR ALL LEVELS IN 1970 AND 1980

COUNTRY	No of Students in (000)						Gross Enrolment Ratios %						Exp on educ. in 1980 GDP %
	P		S		T		P		S		T		
	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980	
KUWAIT	76	150	70	105	3	15	62	89	88	95	3	13	3.1
QATAR	17	30	2	7	0.4	2	100	120	16	35	4	11	2.0
U.A.E.	29	55	5	23	1	4	71	94	15	51	1	4	-
LIBYA	350	635	54	120	5	27	111	147	21	35	3	10	5.5
S ARABIA	423	1081	89	352	8	48	34	62	9	26	1	4	8.7
BAHRAIN	38	55	14	20	0.3	2	109	111	47	52	1	6	-
OMAN	3	132	-	17	00	00	3	90	-	15	00	00	2.2
S. Total	936	2138	234	644	17.7	98	-	-	-	-	-	-	-
IRAQ	1104	2171	314	838	42	140	69	96	24	46	4	10	3.5
ALGIERS	8132	3303	237	929	20	70	73	96	12	34	1	3	8.3
LEBANON	355	658	166	274	43	69	84	123	50	63	18	17	-
JORDAN	238	477	98	249	5	20	63	87	33	56	2	6	3.5
TANZANIA	936	1104	191	219	10	28	100	107	26	23	2	3	6.8
SYRIA	919	1553	329	795	41	103	88	108	38	67	6	11	6.1
MOROCCO	1175	2208	299	796	16	71	43	63	15	27	1	3	6.5
S. Total	6559	11524	1634	4100	177	501	-	-	-	-	-	-	-
YEMEN PDR	135	298	18	98	-	6	59	93	10	38	-	3	4.1
EGYPT	3760	5022	1463	2656	233	641	70	80	33	46	6	13	n.a.
YEMEN AR	88	422	6	90	-	10	10	33	1	9	-	1	1.2
DJIBUTI	n.a.	n.a.	n.a.	n.a.	00	00	-	-	-	-	00	00	n.a.
SUDAN	772	1877	133	640	14	59	30	52	6	22	1	3	6.5
MAURIT.	32	75	4	15	00	00	18	34	3	8	00	00	5.8
SOMALIA	33	366	25	154	1	2	7	65	6	31	0.3	0.4	5.4
S. Total	4820	8060	1649	3653	248	718	-	-	-	-	-	-	-
G. TOTAL	12315	21722	3517	8397	443	1317	58	78	21	36	3	7	-

Source: Unesco Yearbook 1980

Unesco Regional Office of Education in Arab States
'Statistical and Socio-economic Indicators' 1980

P = Primary level; S = Secondary level; T = Tertiary level

Apart from these weaknesses in the quantitative growth of the general education system, several other deficiencies affect the quality and general efficiency of the system which seriously limit its effectiveness and impact on development. Efforts to deal with these problems continued throughout the last two decades. But these were often carried out in a sporadic and piecemeal way and not as part of an overall strategy of reform and renewal. The degree of success of these efforts varied from country to country but remained generally insufficient for enabling the system to make the type and level of contribution to national and regional development which it must be capable of making.

Among the most serious problems which reduce the efficiency and increase the real cost of education are the excessively high wastage ratios resulting from high drop-out and high repetition rates in all education cycles. This problem is particularly acute in the primary level where it has been estimated that only 36% of primary-school pupils complete the courses in the normal period, while 37% complete them after repeating at least one year and 27% drop out before completion, mainly between the first and second years. These figures represent overall averages for the whole region, individual country drop-out rates varying between 10% and 50%. Although, to a lesser extent, the secondary level also suffers from high wastage ratios.

Another weakness which limits the contribution of the general education system to development is the inadequate attention directed to technical and vocational training. Although enrolments in these areas continued to rise during the last two decades, the rate of expansion was generally lower than for the traditional (academic) secondary education, resulting in a steady decline in the relative share of these technical schools in total secondary-level enrolments from 11% in 1970 to 10% in 1978. This is particularly serious in view of the rapidly growing demand for an ever-widening range of technical skills created by the rapid pace of economic development.

Apart from these specific quantifiable problems the education system is further weakened by a number of other factors which affect all levels and forms of the system. These include the structure and contents of curricula, the methodology of education and training, the general approach to the areas of emphasis, the relevance of education to the immediate and pressing needs of the society, the general attitude to creativeness and innovation and the general social orientation of education. These have resulted in general dissatisfaction, including among Arab educators and decision-makers, with the general adequacy of education and training and particularly its degree of relevance to the needs and problems of the society.[1] It is often criticized for being more concerned with preparing individulas to climb the economic and social ladder and does little to implant in the youth genuine notions of public service. The importance of dealing with these qualitative failings of the education system has been emphasized by the 'Third Conference of Ministers of Education and Ministers Responsible for Economic Planning in the Arab States' organized by Unesco in Marrakesh in January 1970 as reflected in resolution (11), para. (3):

> '...that programmes should be constantly revised, evaluated and developed according to the requirements of economic, social and political advances and to the capacities, aptitudes and inclinations of pupils';

and in para. (5) which recommended:

> '...that particular attention be given to the social education of pupils so as to inculcate practical and ethical values and to the development of their personality, talents and capacities through their association in a healthy school environment and directed out-of-school activities'.

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1. The Arab Economy, past performance and future prospects, by Dr Yusif A. Sayigh, Oxford University Press, 1983, page 41.

SECTION II - THE DEVELOPMENT OF HIGHER EDUCATION

By the end of the Second World War there were only 9 institutions of higher education of some significance functioning in the whole region. 4 of these were private, foreign-run, small universities and 3 were purely religious institutions specializing in Islamic and Arabic studies. Their general impact was very limited due to their size, their narrow range of subjects and their general orientation. Attention to higher education began somewhat slowly in the 1950s and gathered momentum in the 1960s and 1970s. The number of fully fledged universities had by 1979 reached 55, with much larger student and staff populations and wider range of fields of studies. A number of other post-secondary institutions have also been established covering the majority of the countries. Also whereas only 5 countries had some form of higher education before the war, 14 other countries have, during the last two decades, established their own institutions with several countries spreading their institutions more widely within the country. Only three Arab countries still remain without any higher education institution of significance.

As a result, total higher education student enrolments increased fairly rapidly to reach 160,000 by 1960, 400,000 by 1970 and 1.3 million by 1980. Obviously, not much of this remarkable rapid growth could have been realized had it not been preceded by the rapid expansion and steady improvement of the general education system, especially of the secondary level. As indicated earlier, the annual rate of expansion of higher education equalled that of the secondary level in the 1960s, at about 8.5%, but exceeded it substantially in the 1970s with 12.5% as against only 9.5% for the secondary level. This fact was of particular significance as it enabled higher education institutions to become more discriminating and selective in their admission of new students and consequently to improve their general academic standards. Equally significant was the pace of economic growth which yielded the needed resources and at the same time heightened the demand for high-level manpower which higher education institutions are capable of producing.

Total number of graduates from all higher education institutions in the whole region have been estimated at 973,000 during the 1970-1980 period, with female graduates accounting for nearly 32% of this number. Whatever the limitations and failings of the Arab higher education, these vast numbers of graduates must have made great contributions to the economic, social, political and cultural improvements which took place in the region during the last two decades. Obviously the considerable improvements and investments in manufacturing, in the expansion and modernization of agriculture, mining, construction, public utilities, public administration and in all areas of social services, including the education system itself, could not have been realized to any significant extent, if the higher education system did not expand in the way it did.

Some of the salient features of the higher education system as it developed during the last decade are presented in Tables 6 and 7. The wide disparity among individual countries which has been noticed in the performance of the national economies and the development of the general education system is also evident in the case of higher education, although it does not necessarily correspond to the disparity in economic performance. Understandably, the higher income group of countries were able to achieve higher rates of expansion in all levels of education, during the last decade, than the other two groups, but these were not sufficient to enable this group to catch up with the middle income group in terms of gross enrolment rations in any of the three levels or even with the lower income group with respect to the secondary and tertiary levels. This cqn be explained by the relatively low base level from which the oil-producing countries started their educational development effort, the long gestation period of investment in education and the relatively long time-lag which must lapse between the expansion of a certain level of education and the

expansion of the immediately higher level. The time-lag becomes inevitably longer where expansion is dictated by pressures of social demand and not in accordance with national development plans reflecting manpower needs.

As indicated in Table 6, total student enrolments in higher education for the region as a whole increased from 443,000 in 1970 to 1,058,000 in 1978. This reflects a remarkably high rate of growth which could not, most probably, have been exceeded in the particular conditions of the region due to a multitude of limiting factors both within and outside the education system. An equally significant development during this decade was the distinct improvement in female participation in higher education. Indeed, during the 1975-1980 period the average rate of growth of female students enrolment in higher education of 11% was the highest rate for either male or female students in any level of education in the region. But although female participation in higher education has increased from 23% in 1970 to 31% in 1978 and to 32.3% in 1980, it is still behind female participation in the primary level (41%) and the secondary level (35%). It is also significant that this improvement in female participation is evident in all countries of the region and more particularly in the higher income group of countries which are often thought of as being more conservative in their attitude to the role of women in society.

In spite of these commendable developments in higher education during the last two decades, they cannot be considered satisfactory if judged against the formidable tasks which the Arab higher education system is called upon to perform. The region with its vast area, population of over 164 million and still increasing annually at a rate of nearly 3% and abundant agricultural, mineral, financial and rich cultural resources, needs vast numbers of higher education graduates in continually widening range of fields of specialization to lead the advance of the Arab nation towards economic, social, cultural, political and technological progress. Although the quantitative side is not the only decisive factor in enabling higher education to play its role effectively, it is nevertheless very important. In this regard, the quantitative growth of the higher education of the region is still far from reaching a satisfactory level. Total number of higher education students in 1980 represents only 7% of the relevant (17-23) age group and only 0.8% of the total population of the region or 815 students for every 100,000 of the population. All these indicators are far below comparable figures of the industrialized advanced countries but are comparable with those prevailing in other groups of Third World countries. However, if Egypt, Syria and Lebanon, which had an earlier start in developing their higher education systems, are excluded, the remaining 18 Arab countries will be far behind all other groups of Third World countries. Although the quantitative picture is unsatisfactory in all these countries, it is particularly so in the low income group of countries. If Egypt, which has the most developed higher education system in the region and accounts for nearly half of the region's higher education students, is excluded the average ratio for the remaining 6 countries would decline to only 230 students per 100,000 of the population, as 3 of these countries have launched their higher education systems only recently and 2 countries are still unable to establish any. As shown in Table 9, the higher income group of countries are also considerably below their needs and their financial capabilities. This was naturally due to their late start in the development of higher education which may have been, in turn, caused by the need to wait for the development and improvement of their secondary-school systems. As already stated, for the region as a whole, the rate of expansion of secondary-school enrolments was until the end of the 1960s faster than that of higher education, but this was reversed in the 1970s when all countries began to pay more attention to higher education. This is confirmed by Table 9 which shows that between 1970 and 1980 the percentage ratio of higher education to secondary education enrolments rose steadily for the region as a whole (from 12.6% to 15.7%) as well as for all three groups and for all individual countries. It is also significant that the biggest change was in the higher income group (from 7.5% to 15.2%) followed by the low income group (from 15% to 19.7%), then the middle income group from 10.8% to 12.2%.

TABLE 6 - TOTAL STUDENT ENROLMENT IN HIGHER EDUCATION
1970 and 1978

COUNTRY	No. of Students		No. of Teachers		Student Staff Ratio		% of Female Students	
	1970	1978	1970	1978	1970	1978	1970	1978
KUWAIT	2686	11621	244	1157	11	10	48	57
QATAR	799	910	69	118	12	8	45	58
U.A. EMIRATES	-	1015	53	76	-	13	-	42
LIBYA	5222	14351	391	1340	13	11	11	22
S. ARABIA	8492	47242	697	4680	12	10	8	23
BAHRAIN	289	973	32	94	9	10	52	35
OMAN	-	-	-	-	-	-	-	-
S. TOTAL	17488	76112	1489	7465	12	10	?	?
IRAQ	42431	98679	1822	5646	23	18	22	31
ALGIERS	19531	60208	?	?	?	?	21	24
LEBANON	42578	78628	244	1157	174	67	23	?
JORDAN	5618	20383	314	1125	18	18	24	41
TUNISIA	10000	28917	?	3591	?	8	?	32
SYRIA	41000	112172	?	?	?	?	?	28
MOROCCO	16097	62107	?	?	?	?	17	21
S. TOTAL	177255	461094	?	?	?	?	?	?
YEMEN (PDR)	91	2517	32	?	3	?	28	26
EGYPT	233304	486067	14250	30142	16	?	26	?
YEMEN (AR)	61	4058	?	?	?	?	3	?
DJIBOUTI	-	-	-	-	-	-	-	?
SUDAN	14308	25836	1153	?	22	?	13	24
MAURITANIA	-	-	-	-	-	-	-	-
SOMALIA	964	2801	?	28	-	29	13	?
S. TOTAL	248728	521279	?	?	-	?	?	?
G. TOTAL	443471	1058485	25000	56000	18	19	23	31

Source: Unesco Yearbook 1980

Apart from the general inadequacy of the levels of enrolments reached by 1980 and the very wide disparities which characterize the higher education system, it is weakened by many serious structural deficiencies. A major deficiency is that the system is excessively dominated by the traditional university-type institutions which are designed to produce high-level professional manpower for various sectors of employment. This reveals a serious neglect of the shorter cycle post-secondary institutions which are capable of training middle-level skilled personnel who normally assist, support or supplement the higher level professional cadres. The shortage of this important type of skilled personnel in the region is very acute, almost chronic, and is continuously growing especially as, in all developing societies, other alternative on-the-job training facilities are not well developed. As revealed by Table 7, the higher education systems of several Arab countries still completely lack this type of institution. For the region as a whole, these shorter cycle institutions accounted for only 19% of total higher education enrolment in 1970. A slight improvement took place during the 1970s to raise their percentage to 23% by 1978, which is still grossly inadequate. According to manpower specialists, developing countries normally need about three middle-level persons for every single professional. Since higher education is virtually the only source of training this type of skilled personnel, this would suggest that these shorter cycle, more practically oriented institutions should account for nearly 75% of total higher education places. Failure to correct this imbalance inevitably leads to lowering the efficiency of all institutions and the productivity of the higher level university graduates especially in areas of acute shortages such as engineering, medicine and scientific research, due to the absence of the support staff and/or due to the waste of time and efforts of the professionals in tasks for which they are ill prepared. As a result of this state of affairs, the region is excessively dependent on imported foreign skills at much higher costs and with all the disadvantages of dependence on foreign personnel.

Another similar weakness which is found within the universities themselves, is the dominance of the normal first degree system where the curriculum runs for 4-5 years and ends with a first (bachelors) degree. It has been estimated that in 1978, approximatley 87% of all university students in the region were registered for first degree courses while only 6% of the students were registered for other shorter courses. Sufficient information is lacking on these below-degree studies. They most probably consist of a wide range of shorter courses including adult education classes, in-service, public administration or business management courses. However, whatever their true nature they are not sufficient as universities can make significant contributions to society through extending their training services to meet vital and urgent needs. But most Arab universities tend to be reluctant to provide below-degree courses of any type, as they consider these to involve misuse of valuable university resources. On the other side of the scale there is the inadequacy of post-graduate training which accounts for the remaining 7% of university places. Not all these are registered for proper research degress such as 'Masters' or 'Doctorates', as a sizeable proportion is devoted to one-year or two-year postgraduate certificates or diplomas.

Naturally, there is no prejudice against extending postgraduate studies, but the excuse for their modest size is either that many universities are still too young to venture into higher studies, or that they lack adequate facilities in terms of staff, libraries and laboratories. In many cases there is a shortage of sufficiently qualified and motivated students, due to the tendency of Arab governments and the universities themselves to send their better qualified graduates for postgraduate training in universities of the advanced countries.

A more serious failure to respond to national manpower needs is in the distribution of university places between the scientific and technological studies such as engineering, agriculture, veterinary sciences and medicine on the one hand and the more theoretical areas of humanities and social sciences. For the region as a whole the science-based studies accounted in 1978 for only 37% of higher education enrolments, while the non-scientific areas took up the remaining 63%. According to Table 7,

only two countries, Algeria and Iraq, succeeded in increasing their student intake in the science-based areas to about 50%, while 11 other Arab countries still devote less than 25% of their places to these areas. This is very unsatisfactory as the structure of manpower needs would require almost the complete reversal of these ratios by increasing enrolments in the science-based subjects to more than 60% of total enrolments. The present situation has resulted in serious problems in employment with acute shortages in the scientific and technological areas co-existing with growing unemployment of graduates in other areas.

There were apparently some improvements in the distribution of students in favour of the science-based studies in the 1960s, after the end of the era of high demand for graduates in humanities and social sciences which characterized the immediate post-independence period. But these improvements ceased and were in most instances reversed in the 1970s in spite of the shift in manpower needs to the scientific and technological areas. A major factor causing this deterioration was the acceleration of the rate of expansion of higher education enrolments resulting from opening new universities and the expansion of the already existing institutions, which favoured the liberal arts areas, being much easier and less costly to expand. The science-based studies with their requirements of special laboratories, equipments and specialized personnel and lower student/staff ratios, are more expensive to expand and operate and require much longer time for providing these facilities before their student intakes can be increased. Hence, with the universities being influenced by pressures of student demands, more than by considerations of manpower needs, the tendency in almost all countries of the region was to follow the easier course of expanding the liberal arts areas much faster than the other areas. In some instances and at some phase, the general weakness of the secondary schools in the basic sciences and mathematics was a limiting factor restricting the number of students who could pursue science-based studies in the unviersities, but this does not seem to be still a major obstacle in most countries. But a limiting factor which still restricts the ability of students to pursue science-based studies is the general weakness of the students in the foreign languages which still constitute the main media of instruction in these subjects in most Arab universities. Another factor which is not easily admitted by universities is that while there are generally accepted international and professional standards for graduates in the science-based disciplines, such standards, in clearly definable terms, are generally lacking in other areas. Therefore, it is often much easier to respond to student demand for places by expanding intake in the humanities and social sciences more freely. Standards of instructions are allowed to deteriorate by overcrowded lecture theatres, scarcity of library and textbooks, and continuously increasing sizes of seminar and tutorial groups.

Obviously the real problem leading to all this is the absence of proper higher educational planning and the absence of any meaningful link between the higher education system and the national planning agencies, which is needed if the distribution of higher education places is to reflect national manpower needs and if the universities are to plan their student intakes several years ahead and accordingly to prepare the required facilities.

A crucial factor in the ability of the Arab higher education to perform its vital role effectively is the size and quality of the teaching and other support staff. As seen from Table 6 the quantitative picture does not seem to be quite satisfactory as the overall student staff ratio for the whole region fluctuated during the last two decades between 17 and 19, with a tendency to deteriorate, reaching 19 by 1978. This is a much higher ratio than in all developed countries and all Third World groups of countries. Only the higher income group of countries were able to maintain satisfactory student/staff ratios and improving them from 12 in 1970 to 10 by 1978. This is an indication of the importance of the financial factor in enabling universities to secure the required number of qualified staff. Indeed, the satisfactory ratios prevailing in the higher income countries are secured by attracting qualified staff from the other two groups who are generally unable to compete with the richer sister countries in terms of salaries and other conditions of employment.

TABLE 7 - PERCENTAGE DISTRIBUTION OF HIGHER EDUCATION STUDENTS BY TYPE OF INSTITUTION, FIELD OF STUDY AND STUDY LEVEL IN 1978

COUNTRY	% of students in Universities		Field of Study (%)		Degree Level (%)		
	1970	1978	Science based subjects	Other subjects	Below degree	1st deg.	Post deg.
KUWAIT	87	76	23	77	23	73	4
QATAR	100	100		100		89	11
U.A. EMIRATES		100	20	80		100	
LIBYA	?	?	35	65	?	?	?
S. ARABIA	100	83	20	80	6	89	5
BAHRAIN	-	-	-	100	100	-	-
OMAN	-	-	-	-	-	-	-
S. Total			23	77			
IRAQ		82	56	44	21	76	3
ALGIERS	100	100	54	46	10	84	4
LEBANON	100	100	16	84	?	?	?
JORDAN	81	50	31	69	50	46	4
TUNISIA	100	100	49	51	?	?	?
SYRIA	?	86	46	54	?	?	?
MOROCCO	96	77	24	76	?	?	?
S. Total			41	59			
YEMEN (PDR)	00	00	24	76	40	60	00
EGYPT	81	?	36	64	00	91	9
YEMEN (AR)	100	100	2	98	00	100	00
DJIBOUTI	-	-	-	-	-	-	-
SUDAN	90	79	27	73	1	97	2
MAURITANIA	-	-	-	-	-	-	-
SOMALIA	100	100	36	64	?	?	?
S. Total	-	-	35	65	-	-	-
G. TOTAL	81	77	37	63	-	-	-

Source: Based on data from Unesco Yearbook 1980

The breakdown of the teaching staff according to areas of specialization is not readily available, but there are obvious indications that the student/staff ratios are much higher in the humanities and social sciences than in the other scientific and technological areas, in spite of the fact that it is much more difficult to recruit staff in these science-based subjects. All Arab universities tend to adhere to certain minimum teaching standards including certain minimum student/staff ratios in the professional subjects. But many of the older universities of the middle and lower income groups which had succeeded in earlier years to build reputations of good standards are now faced with considerable difficulties in maintaining these standards due to the continuous loss of qualified and experienced staff to other countries and mainly to the new universities in the higher income group of countries. Whatever gains may accrue to these new universities, these cannot certainly offset the damage caused to the older universities and Arab higher education as a whole stands to suffer. Attempts to control this situation by a more sensible system of staff secondment or exchange have been made by the Association of Arab Universities, but were not successful. Also suggestions that the richer universities should compensate the older and poorer universities financially so they may expand their own staff development programmes were often made but also without any significant outcome.

However, these problems which have clouded the supply and distribution of higher education staff have not prevented a steady improvement in the general quality of the teaching and other support staff. The older universities which were functioning in the 1950s and 1960s had to prescribe flexible criteria for the appointment of academic staff as they were heavily dependent on non-Arab expatriate staff and as there were not many nationals who could have met more stringent criteria. A good first degree from a reputable university with or without relevant academic experience was considered sufficient for appointment. At the same time staff development programmes were established and steadily expanded in all universities, by selecting some of their outstanding graduates for postgraduate studies in Western European and American universities to obtain doctorate degrees or equivalent professional qualifications. These programmes have contributed immensely to the increase in the national staff and improvement of their qualifications, which must have been a key factor in the development of Arab higher education during the last two decades. But these developments have gradually led to a shift in almost all universities to a more regimented and rigid system of staff appointment where a doctorate degree or equivalent qualification has become the minimum qualification for a teaching post. Holders of good first (bachelor) and second (masters) degrees are only appointable as teaching or research assistants or demonstrators. Although these developments have contributed to the improvement of general academic standards and opened the way for the development of postgraduate studies and promotion of research, the rigidity of the system cannot be defended especially at a time of rising student/staff ratios, and the increasing failure of the universities to develop their other non-teaching functions. There must also be many persons in the region who although they did not obtain formal higher degrees can, as a result of a combination of self-education and useful practical experience, enrich the universities' teaching capabilities.

The impact of higher education

A proper assessment and evaluation of the real impact and effectiveness of the Arab higher education system cannot be solely based on the statistically measurable indicators of student enrolments and staff formation. The total numbers of graduates is a very important factor but how these growing numbers of graduates perform their functions in society is equally, if not more, important, Their thorough command of their fields of specialization, the relevance of their studies to the real needs of the society and the general orientation and attitudes of the graduates to the service of society are basic factors in determining the effectiveness and real impact of higher education. Also apart from the teaching function, higher education institutions, especially universities, have other important roles in the area of

research, service to the community and the preservation and revival of national culture. However, the pure quantitative role, in terms of students and graduates is the easiest for any university to perform. Universities can be easily established once the decision has been taken by the appropriate authority and the required funds are voted for the provision of the physical facilities and the recruitment of staff. As has been the case in most of the new Arab universities, the internal academic and administrative organizational structures are often hurriedly drawn up and curricula structures and contents are borrowed, if not completely copied, from another university in the same country or in another country in or outside the region. But it is far from easy for a university established in this way to acquire the basic qualities which ensure effectiveness.

All Arab universities subscribe to the ideals of universities and are certainly aware of the need for them to contribute to the economic, social and cultural transformation of their respective societies. Their attempts to become effective in their teaching and non-teaching roles have never ceased but have not so far been sufficiently successful. Two factors, or more correctly groups of factors, have so far been responsible for this failure. The first is their preoccupation with the quantitative growth of their undergraduate studies. The second is the fragmentation and the general orientation of the Arab higher education system.

The effect of quantitative growth is obvious and does not call for much elaboration. Throughout the last two or three decades Arab higher education and universities in particular have been overwhelmingly dominated by the need to expand total student enrolment due partly to pressure of growing demand for graduates in all areas of studies and partly to pressures of rapidly increasing output of the secondary schools. Yielding to these pressures took the form of expanding the already existing institutions in areas which were easier to expand as well as opening, often very hurriedly without adequate preparation, new institutions. Under such conditions and with the constraints of finance and/or qualified staff, the highest priority was accorded to undergraduate, or first degree, studies with the virtual exclusion of all other tasks and functions including the need to improve and upgrade the academic standards of undergraduate studies. Postgraduate studies with their relatively heavy demand on staff resources were, as seen before, considerably curtailed and, in many instances, totally suppressed. This deficiency has been often rationalized by a widespread belief that Arab countries can continue to rely on the postgraduate facilities which are available in advanced countries. This argument seems to ignore the important role of postgraduate studies in the stimulation of research and improvement of the quality of undergraduate studies. The reserach function of the universities also suffers from the dominance of undergraduate teaching not only due to the paucity of research funds and the lack of adequate research facilities but also due to the heavy teaching load of staff. Apart from the responsibility of universities to satisfy part of the national needs for research, the role of research in the development of the university and, more importantly, the improvement of its own staff is often underestimated. The outcome is the unsatisfactory performance of all Arab universities in the area of research which is often confined to what university promotion regulations require. This type of research is generally of the abstract and theoretical type which is more easily publishable in specialized foreign journals. Even this type of research is apparently decreasing as promotion criteria are continuously revised to shift emphasis from research to teaching loads.

In the circumstances other functions of universities in the area of direct service to the community and the development of national culture suffer and cannot receive more than verbal support. Perhaps more damaging to the cause of Arab universities is the fact that the dominance of undergraduate teaching has lasted for so long as to appear to have become a permanent feature of Arab universities and has inevitably resulted in an unhealthy atmosphere of pessimism and low morale in all university campuses. This must have contributed much to the serious 'brain drain' from many countries of the region and from the region as a whole. Thus

a vicious circle has been created whereby shortage of finances and staff leads to further loss of staff and higher costs due to the reliance of Arab universities on expatriate staff. The effect of the fragmentation of the higher education system and its general orientation on the quality of higher education is not as direct and straightforward as that of the dominance of quantitative growth. By fragmentation is meant the absence of any organized system at the national level or the regional level which is capable of ensuring some degree of co-operation or co-ordination. Within most countries, the higher education system consists of one university or more and a number of specialized post-secondary institutes. In a multiple university system a certain degree of uniformity and similarity exists among the universities and a certain level of co-ordination is often exercised by a higher authority which may be the Ministry of Education, the Ministry of Higher Education or some form of national council. Co-ordination often extends to the allocation of student intake among individual universities and among various fields of studies. In some cases co-ordination goes beyond what can be considered desirable by leading to excessive similarity among the universities in their curricula, teaching methods and examinations.

No outstanding links exist between universities and other higher education institutions, although they are supposed to complement each other satisfying national needs for various types of higher education graduates. Also as the post-secondary institutes tend to be specialized in fairly narrow areas and are generally designed to cater for specific middle level manpower needs they are generally sponsored or directly administered by government departments which employ their graduates or have certain responsibilities in their areas of specialization. This close link between the training institutions and employers of their graduates have the important advantage of ensuring the practicability and relevancy of their curricula to the particular needs of employment and that these are revised and adjusted to the changing needs of employers. The fact that these institutes belong to different departments and that their policies cannot be easily co-ordinated with each other or with those of other sectors of higher education does not raise serious problems except in such areas as the evaluation of their diplomas mainly for the purpose of determining terms of employment and criteria for promotion.

However, higher education faces problems of co-operation and co-ordination at the regional level. A major obstacle here is the existence of several types of models of higher education systems and mainly universities which tend to have their own organizational and curricula structures and their own orientation and approach to higher education. The oldest of these models which is the oldest in the history of higher education in the world, is the traditional Islamic University, which has been functioning in the region for over 1,000 years and specializes in Islamic and Arabic studies. Several of this type of institution still exist in several countries and have recently been joined by some new 'Islamic Universities', which differ from other modern universities mainly in name and in emphasis on religious subjects. The bulk of Arab universities and other higher education institutes which are described as 'modern' belong to different university models. The oldest and most widespread in the region is the 'French model' which exists in all Arab countries which were under French domination, and had strong influences on the Egyptian university system. The second model in importance is the 'British model' which characterizes the universities in countries which were under British rule. The 'American model' which was until recently restricted to a few private American universities, has assumed more significance in recent years in some of the countries which launched their university systems during the last decade. While it may not yet be accurate to identify an 'Egyptian model', as Egyptian universities still exhibit strong French influences, the Egyptian university system has developed some significant features of its own and has influenced some of the newer universities in the region due to their dependence on Egyptian teaching staff, senior administrators and other personnel.

No serious objection can be raised against any developing country launching its first university to seek assistance and guidance from one of the established and resourceful universities of one of the advanced countries and consequently to adopt their 'model'. In the case of the Arab region this argument must have been strengthened by the inability of the traditional 'Arab model' to provide much help after stagnating for so many centuries. The selection of a certain foreign model must have also been strongly influenced by such factors as similarities in the organization and general orientation of the general education system, in the general institutional set-up of government and other establishments, as well as in foreign language considerations. But the problem of adopting a foreign model arises when it is not confined to the general organizational structures and to the initial phase of the development of the university, so that the model could be gradually adapted to the particular needs and conditions of the particular Arab country. With the obvious close similarities in economic, social, political and cultural conditions of all Arab countries, adaptation of the foreign models to local needs should have opened the way for the gradual convergence of these models and the eventual emergence of an Arab university model, more competent to serve the needs, and to fulfill the aspirations of the Arab nation and more capable of establishing stronger ties of co-operation, co-ordination and complementarity among the national higher education systems.

But this was not the way Arab universities developed as in almost all cases, once the original ties were established with a certain model, new factors emerged which further strengthened the dependence on the sponsoring university and the selected model. One significant factor was the excessive dependence on expatriate staff who were recruited from, or with the assistance of the sponsoring university and generally occupied senior positions in the host Arab university. Even after the successful localization of the teaching staff, the ties continued through systems of external examiners, imported from the sponsoring university and its sister institutions, whose role was to see that good academic standards were maintained often using yardsticks which are relevant to the advanced industrialized societies. Another factor of more serious and more lasting effects on the adherence to the adopted 'models' was the excessive reliance on the same group of universities for postgraduate training of the future national staff of the younger Arab universities.

The outcome of these developments was not only the fragmentation of the Arab higher education system, but also the chronic adherence to the structures, policies and ideals of some alien university systems. The fact that these systems are effective and relevant to the complex socio-economic structures of the advanced industrialized societies does not mean that they are suited to the needs of the present-day Arab society or that they are capable of contributing to the development and progress of the Arab countries. But adherence to this system does not mean that Arab universities do not seriously try to adapt and adjust their curricula to the needs of their respective societies. They try but their attempts are weakened by their sporadic and piecemeal nature and by the conflict between what is considered as adequate 'academic standards' and the need to localize their curricula contents. The real problem is that academic standards are defined in terms of curricula structures and contents, teaching methods and even examination questions and answers of some universities of the advanced countries, which does not leave much scope for any significant localization. Even with all these efforts the average graduate of Arab universities cannot attain the same academic standards of the graduates of the foreign universities because of the irrelevance to him of much of what he is made to study in addition to the many problems resulting from rapid quantitative expansion. These over-cautious and conservative attitudes of most Arab universities are not restricted to curricula structures and contents, but affect all aspects of university organization, policies, procedures and practices. On the organization side, all Arab universities have the common feature of considering the 'faculty' as the basic division of the university, and is subdivided into several departments. Faculties are generally responsible for all courses leading to one degree or several related degrees. As faculties

enjoy a considerable measure of autonomy, this system results in considerable waste due to overlapping and duplication of certain facilities among different faculties. The system is also characterized by much rigidity which inhibits innovation and change and deters the introduction of multidisciplinary course structures.

The admission policies and procedures which are geared to the university's organizational set-up and its degree structures are also characterized by a certain degree of rigidity. All Arab universities select their new students on the basis of their performance in the national secondary school certificate examinations. Admission regulations prescribe the minimum level of attainment in these examinations for admission to the university with further requirements of performance in a certain group of subjects for admission to particular faculties. At the earlier stages of the development of higher education in the region, admission regulations were often applied more liberally as the numbers of qualified applicants were not in excess of numbers of available places. But as secondary schools expanded rapidly and their general performance continued to improve, the gap between the numbers of applicants and the numbers of places continued to widen, in spite of the rapid increase in the intake of universities. Almost all Arab universities adopted new selection procedures, without any attempt to change the regulations. According to the new procedures, applicants are required to specify their scale of preferences and the final decisions are taken on the basis of a combination of performance in the secondary-school examinations and students' preferences. In countries with more than one university, independent bodies have been set up with representatives from all universities to process the applications and distribute the successful students among various universities and among various faculties within each university. The vast number of applicants involved and the short time available between the publication of school examination results and the beginning of the new academic session, excludes the possibility of introducing other support measures such as personal interviews or special aptitude tests. This has resulted in high failure, repetition and drop-out rates from the universities which constitute waste of valuable resources and generally depress academic standards.

The admission policies of all Arab universities can be considered, on the whole, to be fairly liberal and non-discriminatory in the sense that no particular social class or ethnic group is explicitly favoured or barred from admission. This attitude is further strengthened in most countries by the offer of financial support to needy students. However, in practice, democratization of higher education is considerably weakened by the meritocratic approach to admission as emphasis is placed on performance in the secondary-school examinations. Hence such factors as the geographical location of secondary schools and the family background of the students become dominant factors in determining access to the universities. It has been found that in almost all Arab universities sons and daughters of peasants and nomads are generally very poorly represented, while sons and daughters of government officials and merchants occupy most of the available university places. A few Arab countries, namely Egypt, Sudan, Algeria and Iraq have attempted to redress the blance by systems which favour certain minority or 'distressed groups' such as Palestinian refugees or students from distant, less developed, districts. More significant for the democratization of higher education was the recent development in most Arab countries of opening new universities and other higher education institutions in different parts of Arab countries whereby weakening the geographical barrier to access.

Perhaps one of the most serious consequences of the Arab universities' excessive dependence on alien university systems, their ideologies and cultural values, is the fact that the use of Arabic language as the medium of instruction has not been sufficiently extended. With the exception of Syrian universities which have successfully extended the use of Arabic as the sole language of instruction in all subjects, including medicine and engineering, all other Arab universities rely on either French or English as the medium of instruction in all or most subjects. The reliance on these foreign languages was in the earlier stages of higher education development

justified by the dependence on expatriate teachers and by the fact that in many countries these foreign languages were still the media of instruction in secondary schools. However, with the successful completion of Arabicization of teaching in the school systems of most countries and the considerable increase in the numbers of Arabic-speaking teaching staff, the resistance to Arabicization shifted to new arguments. The main objection now seems to centre on the unavailability or inadequacy of textbooks and other reference material in Arabic and the desirability of improving the command of one major European language by university students. The weakness of this argument has been exposed by the notable success which Arabicization has achieved in all countries and all areas where it has been implemented and by the fact that some universities still use foreign languages to teach such subjects as 'Islamic Philosophy' or history, geography and sociology of the Arab countries, where the original texts and hundreds of other excellent references are available in Arabic. It is also a fact that it is the delay of Arabicization which is delaying and discouraging the production of more textbooks and other materials in Arabic and not the other way around.

Arabicization is essential not merely to satisfy national pride and to enhance the role of the Arab universities in the preservation and revival of Arab cultural heritage, which are pertinent factors, but also as basic conditions for improving the whole educational process. It is a fact that in most Arab countries, the command of foreign languages by secondary-school graduates has been very much weakened due to a multitude of factors including the shortage of foreign-language teachers. Remedial language teaching in many Arab universities to improve the students' ability to study their subjects in foreign language has not improved the situation significantly. It has therefore become almost cruel to continue to require these students to study their new university subjects in languages which they do not command while their own national language is amply capable of performing the required functions. In the circumstances the students are unable to utilize their textbooks, other library material or even to take proper lecture notes. Their teachers are therefore compelled to prepare full lecture texts and dictate them and confine examinations to the contents of the dictated lecture texts. It is difficult to see how satisfactory academic standards can be maintained with these teaching practices. It is also difficult to see how universities can meaningfully localize curricula contents and orient their students to a better understanding of their own societies without the use of the national language.

SECTION III - FUTURE TASKS FOR THE ARAB HIGHER EDUCATION SYSTEM

The tasks which lie ahead for the Arab higher education system to perform are, in brief and simple terms, to continue to grow in size but to pay much more attention than in the past to the improvement of its quality. A proper understanding of the true dimensions and implications of the failings and shortcomings which have weakened the system in the past and genuine efforts to deal with these problems are essential if the higher education system is to play an effective role in the reshaping and progress of the Arab society. What the Arab region, as a whole, achieved in the past two decades was economic growth based on the expansion of a few isolated sectors, which has left behind many defects in the socio-economic structure as elaborated in Section I of this study. What is needed now is a fresh approach and a new strategy for Arab development which realizes that to be lasting and to be really effective in realizing the objectives of the Arab society, development must be comprehensive, integrated and endogenous. This calls for a complete departure from the old approach which viewed economic growth as development or treated it as the only important factor in development. The new appraoch must deal with all economic, social, cultural and political considerations together at the same time. As man is both the goal and the main factor in development and as the widest possible participation of all groups of population in the development process is essential, the new approach places considerable emphasis on the importance of the equitable distribution of the benefits and burdens of development. This is not justified merely by

considerations of social justice but also as a condition for dynamism and equilibrium. It is also stressed that to become really effective and lasting, development must be endogenous in the sense that the society must keep its identity intact, rely on its own strength and resources and construct its own development model based on its natural richness, particular needs, cultural identity and particular structures of thought and action.[1] In the special circumstances of Arab countries, comprehensive development should go beyond the narrow national (country) approach and assume wider regional dimensions as the Arab region is not merely a geographical entity but has many significant common features and convergent aspirations in the economic, social, cultural and political/security areas. This regional approach calls for the harmonization and integration of national development strategies and policies within an overall vision of Arab development, which should not lose sight of the particular endowments and problems of individual countries. As seen earlier, joint Arab action developed throughout the last two or three decades but was confined to a limited exchange of trade, joint finance of projects, restricted flow of financial aid and flow of manpower, but has not advanced to levels of complementarity and integration. This has been obstructed by the emergence and steady growth of national, as opposed to regional, tendencies, fed by separatist-vested interests and supported by erroneous short-sighted assessments of costs and benefits of integration.[2] However, a compromise between the two extremist tendencies of diluted co-operation and complete integration has emerged in recent years and finally took the shape of a well considered 'Strategy for Joint Arab Economic Action' which was formally adopted by the Arab Summit held in Amman, Jordan in November 1980. This differs basically from the policies and practices of the past which were more concerned with achieving complementarity through the liberalization of inter-Arab trade and the piecemeal promotion of joint projects. The emphasis has shifted to increasing production more directly through a new approach of systematic planning based on an agreed scale of overall (regional) priorities. This system of priorities gives precedence to investments and efforts in such areas as manpower training and education, acquisition of technological capability, food security, basic (engineering) industries and energy.

It must be a most encouraging and welcome step that the highest political regional authority formally accords highest priorities to education, training and to the acquisition of technological capability as key factors in realizing the objectives of regional economic development. This naturally implies a much greater future role for the Arab higher education system not merely through its teaching function but also through direct involvement in the development of all economic and social sectors through its research and public service functions. These tasks cannot be properly performed by simply continuing to expand student numbers and paying some attention to the other non-teaching functions, while leaving its structures, policies and practices unchanged. As seen in Section II of this study, Arab higher education cannot be even modestly effective without far-reaching changes which amount to complete and thorough overhauling in all its aspects which must extend to its general conception, objectives as well as its structures, contents and methods. Also as higher education is an integral part of the general education system, it cannot be substantially improved while the general education system continues to be plagued with all the weaknesses from which it suffers. The reform of the higher education system must therefore form part of national and regional strategies for overhauling the whole education system and in the context of national and regional comprehensive development strategies.

In the context of higher education development and reform, quantitative growth must naturally continue to occupy a prominent place as it has been established that the present levels are still below the needs of the region and as demand for higher

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1. 'New Prospects in Education for Development in the Arab Countries', page 20, Unesco document ED-77/MINEDARAB/3, August 1977.
2. 'The Arab Economy', Dr Yusif A. Sayigh.

education and graduates is expected to continue to rise fairly rapidly. Expected expansion of student enrolments, gross enrolment ratios and number of teachers for the region as a whole up to the year 2000, as projected by the 'Unesco Regional Office for Education in the Arab States' in 1980, is summarized in Table 4. According to these projections total higher education enrolments for the whole region between 1980 and the year 2000 is expected to increase nearly fivefold from 1.3 million to 6.2 million students. Although the average rate of growth of higher education enrolments is expected to decline steadily from 12.4% in the 1970s to 7.3% towards the end of the century, the rates of growth of other levels of education will decline much faster and consequently the percentage share of higher education in total enrolments will continue to rise from 2.4% in 1970 and 4.1% in 1980 to 9.1% by the year 2000. The ratio of higher education enrolments to total secondary-school enrolments is expected to increase from 12.6% in 1970 and 15.6% in 1980 to 31.8% by the year 2000. As a result of this continued attention to the development of the higher education system, the overall regional gross enrolment ratio in higher education is expected to increase from 3.3% in 1970 and 7.0% in 1980 to 19.1% by the year 2000. Female participation in higher education is also expected to continue to improve throughout the coming two decades although at a somewhat less rapid pace than in the last two decades. Accordingly, female students' ratio to total student enrolments is projected to increase from 32.3% in 1980 to 36.5% by the year 2000.

The number of higher education teachers are projected to increase at a slightly lower rate than the increase in student enrolments for some time and then at a faster rate in the last decade of the century. Total number of teachers are expected to increase from 68,000 in 1980 to 149,000 in 1990 and to 344,000 by the year 2000. As a result, the overall regional student/staff ratio is expected to continue to increase from 16 in 1970 and 19 in 1980 to 20 in 1990 and then to begin to improve slowly to reach 18 by the year 2000.

A breakdown of student enrolments in all levels by individual countries in 1980 and the year 2000 is provided in Table 8. Although higher education projections do not cover the three countries which had not launched their higher education by 1980, all the remaining 18 countries are expected to expand their total higher education enrolments substantially in the coming 2 decades. But again the rates of expansion are expected to continue to vary widely among countries according to their rates of economic growth. As the higher income group of countries are expected to catch up with the other 2 groups in the development of all education levels before the end of the century, the levels of enrolments reached by the year 2000 are also expected to increase their higher education enrolments between 1980 and 2000 nearly 8.2 times compared with 4.7 and 4.1 times respectively for the middle and lower income groups. In terms of the ratio of higher education students to 100,000 of the total population, the higher income group are expected to improve their ratio from 665 to 2865, the middle income group from 685 to 1780 and the lower income group from 975 to 2535. Excluding Egypt from the lower income group, the ratio of the remaining six countries are expected to improve their ratio from 230 to 1440 which reflects a very high rate of expansion but still far below their needs by the year 2000. In terms of gross enrolment ratios only 9 countries are expected to reach or exceed the 25% mark by the year 2000 while the remaining 9 countries will have ratios ranging between 9% and 23%.

The total number of higher education graduates in the coming two decades, in terms of cumulative 5-year totals, are expected to be as summarized below:

TABLE 8 - PROJECTED INCREASE IN STUDENT ENROLMENT AND ENROLMENT RATIOS FOR ALL LEVELS 1980-2000

COUNTRY	Students in (000)'s						Gross Enrolment Ratio %					
	P		S		T		P		S		T	
	1980	2000	1980	2000	1980	2000	1980	2000	1980	2000	1980	2000
KUWAIT	150	294	105	190	15	56	89	98	95	97	12.8	26.7
QATAR	30	58	7	26	2	10	120	121	35	65	15.5	31.3
U.A.E.	55	122	23	53	10	25	54	113	51	65	12	27
LIBYA	635	0184	120	303	84	151	147	134	36	52	22	28
S ARABIA	1081	3123	352	1283	48	566	62	97	26	49	4	27
BAHRAIN	55	110	20	44	5	15	111	118	62	83	15	27
OMAN	132	275	17	169	-	?	90	99	53	78	-	?
S. Total	2138	5071	644	2068	98	823	-	-	-	-	-	-
IRAQ	2171	4294	838	2132	140	587	96	101	46	63	10	2
ALGIERS	3353	6459	929	2481	70	382	96	102	34	51	3	10
LEBANON	658	940	274	497	69	252	123	115	63	69	23	35
JORDAN	477	850	249	549	20	141	87	91	56	66	6	20
TUNISIA	1104	1714	219	544	28	128	107	110	23	35	3	10
SYRIA	1553	2779	795	1515	103	469	108	110	67	67	11	25
MOROCCO	2208	4105	796	1995	71	408	63	76	27	39	3	9
S. Total	11524	21141	4100	9713	501	2467	-	-	-	-	-	-
YEMEN PD	298	643	98	205	6	83	93	103	38	44	3	23
EGYPT	5023	7127	2696	4885	641	2249	80	84	46	63	13	32
YEMEN AR	422	1789	90	687	10	118	33	74	9	38	1	9
DJIBUTI	?	?	?	?	?	?	?	?	?	?	?	?
SUDAN	1876	4939	640	1506	59	467	52	73	22	30	3	12
MAURIT.	75	219	15	80	-	?	34	66	8	28	-	?
SOMALIA	366	652	154	346	2	87	65	85	31	45	0.4	11
S. Total	8066	15369	3653	7709	718	3004	-	-	-	-	-	-
G. TOTAL	21722	41581	8379	19490	1317	6194	78	90	36	50	7	19

Source: Unesco Regional Office for Education in the Arab States
'Statistical and Socio-Economic Data in the Arab States' 1980

P = Primary level; S = Secondary level; T = Tertiary level

5-year periods	No. of (000) graduates			% of female students
	Male	Female	Total	
1980-85	574	306	880	34.8
1985-90	825	468	1293	36.2
1990-1995	1183	686	1869	36.7
1995-2000	1696	989	2685	36.8
Total 1980-2000	4278	2449	6727	36.4

The total annual cost of realizing these targets of higher education for the whole region are estimated, in terms of 1977 prices, to increase from US $1.2 billion in 1980 (consisting of 750 million recurrent and 450 million capital costs) to $5.2 billion by the year 2000 (consisting of 3.9 billion recurrent and 1.3 billion capital costs). The percentage share of total higher education costs in total education costs of all levels is expected to rise sharply from 7.3% in 1970 and 13.4% in 1980 to 26.4% by the year 2000. This naturally reflects the relative under-development of higher education and the need to expand high education enrolments much faster than other education sectors as revealed in Table 9.

In spite of these considerable projected increases in higher education costs, the projected quantitative growth of the higher education system should be feasible in view of the useful experience accumulated by most Arab countries during the last two decades, the expected expansion and improvement of secondary education and the expected continuation of the relatively high rates of economic growth in most countries of the region. There is, however, the possibility that the projected numbers of students and of graduates may not be sufficient for the region if, as expected, economic activities are intensified and diversified, especially in the higher and middle income groups of countries and if development is extended, as it should be, to other social and cultural areas. Indeed some manpower studies have indicated that total demand for higher education graduates in the coming two decades may be around 15 million for the whole region.[1] Even if the Arab higher education does not try to expand further in response to pressures of increased manpower needs, it may fail to resist the stronger pressures of social demand resulting from demographic factors. The total population of the region in the 18-23 age-group is expected to continue to increase at more than 3.5% annually from 19.2 million in 1980 to reach 32.4 million by the year 2000. Also the total number of secondary-school graduates during the two decades are expected to exceed 20 million, of whom higher education is projected to absorb less than 30%.

However, whether quantitative growth of Arab higher education is confined to the projected levels or whether these are exceeded, quantitative growth is only one aspect, although a very important factor, of the role of higher education in the

1. Dr A. Nashar: 'The Administration of Arab Universities', Cairo 1976.

TABLE 9 - HIGHER EDUCATION DEVELOPMENT INDICATORS

COUNTRY	Higher Edu. Enrolments as % of Secondary Level Enrolments			No. of Higher Edu. Students per 100,000 of the Population		
	1970	1980	2000	1970	1980	2000
KUWAIT	4.2	14.2	29.4	365	1095	1710
QATAR	20.0	28.5	38.5	725	910	2300
U.A. EMIRATES	20.0	27.4	47.2	440	500	1530
LIBYA	9.2	22.5	50.0	265	900	2620
S. ARABIA	8.9	13.6	44.1	140	575	3622
BAHRAIN	2.1	10.0	34.1	130	670	2780
OMAN	-	-	?	-	-	?
S. Total	7.5	15.2	40.0	170	655	2860
IRAQ	13.3	16.7	27.5	460	1070	2420
ALGIERS	8.4	7.5	15.4	150	375	1060
LEBANON	26.0	25.0	50.7	1720	2185	5150
JORDAN	5.1	8.0	25.7	245	625	2390
TUNISIA	5.2	12.8	25.5	195	440	1340
SYRIA	12.4	13.0	31.0	655	1200	2880
MOROCCO	5.3	8.9	20.5	105	350	1130
S. Total	10.8	12.2	24.4	330	685	1780
YEMEN (PDR)	-	6.1	40.5	5	315	2455
EGYPT	16.0	24.0	46.0	710	1525	3475
YEMEN (AR)	-	11.1	17.2	1	165	1185
DJIBOUTI	-	-	?	-	-	?
SUDAN	10.5	9.2	31.0	100	320	1495
MAURITANIA	-	-	?	-	-	?
SOMALIA	4.0	1.3	25.1	35	55	1390
S. Total	15.0	19.7	39.0	435	975	2535
G. TOTAL	12.6	15.7	31.8	365	815	2210

Source: Based on data from 'Statistical and Socio-Economic Indicators of Arab States' 1980

comprehensive development of the region. To become really effective, quantitative growth must be accompanied, if not preceded, by far-reaching and fairly radical changes in all the important areas of the higher education system with the aim of doing away with all these failings and shortcomings which have so far weakened the system and limited its impact on development. This is not likely to be an easy task considering how deeply rooted are the causes of these weaknesses in the basic foundations of most Arab universities and in their attitudes and general conceptions. But it is to be hoped that the new universities which will be established in the region in the coming two decades will be in a better position to avoid the mistakes of their predecessors and become genuinely more responsive to the needs of the society. This calls for Arab universities to become more imaginative and creative not merely by innovating new structures and developing new attitudes and approaches but also by transforming existing ideas and structures and their readjustment to the new needs and demands of the society. The number of new universities to be established in the coming two decades must be substantial. Even if total student enrolments do not exceed the projected 6.2 million by the year 2000, and if, the percentage share of universities in total enrolments is reduced from the present level of 75% to about 50%, the number of university students should be around 3.1 million. If the average size of a university is increased from the present 17,500 to around 20,000 students, total number of universities in the region by the year 2,000 should be at least 155 universities, representing an increase of 100 new universities. But the fact that so many new universities will come into existence in the coming two decades does not by itself ensure that they will be significantly different from, or more effective than, the older institutions. Indeed the tendency in the past in almost all Arab countries was for the new universities to come out, more or less, as exact copies of the other universities. The main reason for this was that the new universities were often started as offshoots of the older ones or at least by men recruited from older institutions. Another factor was that the new universities were often started at very short notice under pressure of student demand without allowing the leaders of the new universities enough time for proper planning. It is, therefore, essential for allowing and encouraging the new universities to be more imaginative and innovative and to bring a fresh outlook and a new approach to the higher education scene, that the opening of new institutions should form part of longer-term and medium-term higher education and general education plans.

With this hopeful statement on the possibility of improving the performance of the Arab higher education system, it should be possible to turn to the main features and the new positive qualities which higher education must acquire in the course of the coming two decades if it is to justify the substantial and continuously increasing financial and human resources which will be allocated to the system. This should not be a difficult task since the main weaknesses and shortcomings have already been identified.

To begin with, the dominance of the traditional university-type institutions could be changed in favour of the shorter cycle post-secondary institutions to meet crucial middle-level manpower needs. It has been already pointed out that the ideal ratio between the two types of higher education institution may be the reverse of the present ratio where the universities account for nearly 75% of total higher education enrolments. A recent report of the Egyptian Higher Education Council has indicated that while total demand for university degree holders up to the year 2000 in Egypt would be about 0.5 million, the demand for middle-level technical and other equivalent personnel is projected to be about 5.5 million. The Egyptian situation may not be representative of the whole region, but it clearly points out the urgency of the need for paying more attention to these practically oriented, shorter cycle institutions. In this connection, Arab countries may consider the idea of 'Junior' or 'Rural' colleges which has often been considered in several Arab countries but never implemented for no obvious reasons. Apart from opening up new useful employment opportunities for their students, these colleges could bring immense advantages to the universities by providing them with better prepared and more mature students, thus making it possible for them to shorten the length of their degree courses

and to improve their academic standards. On the other hand the secondary schools could do away with their too-early specialization as the proposed colleges would naturally be specialized.

The shift to all types of shorter cycle colleges and other institutions should bring many greater advantages to the higher education system and to the employment market. By providing the needed middle-level personnel the efficiency of the production institutions can be appreciably improved and their operating costs reduced. The average costs of higher education could also be significantly reduced as the shorter cycle institutions are generally much less costly than the universities.

However, a more positive outcome of the shift is the greater possibility of distributing these institutions widely in different parts of the country including the rural areas due to their relatively smaller size and narrow range of specialization. This would certainly lend a new important dimension to the democratization of higher education by moving away from its present heavy concentration in a few urban centres. This wider geographical dispersal would bring these higher education institutions closer to the productive establishments in all sectors of production and enable them to adapt their teaching and research to their needs and to provide them with useful services.

Another serious structural weakness in the Arab higher education system which has been identified is the inadequate attention paid to the scientific and technological studies which account for only 37% of total university places, whereas manpower needs would suggest raising this ratio to not less than 70%. As the insufficiency of secondary-school graduates who are capable of pursuing scientific studies is not, any more, the limiting factor, the problem now seems to be the higher recurrent and capital costs of providing these studies compared with those of liberal arts subjects together with the absence of proper long-term and medium-term university planning. It is to be hoped that if the pressure of student demand is lessened by a shift to other shorter cycle institutions, and if better planning is introduced and more resources are made available, universities will begin to correct this serious imbalance. However, this is a too-important issue to be left to the initiative and judgment of individual universities especially since a move in the right direction by a few institutions can be offset by a move in the opposite direction by some other universities. The correction of the balance must form part of a national higher education plan which must in turn form part of a national education plan, co-ordinated within a regional perspective of higher education development.

Some key issues concerning the overall structure of Arab higher education have so far been briefly discussed in the context of a broad strategy for the future development and improvement of higher education. The continuation with rapid growth of student enrolments with progressively more attention to the shorter cycle institutions, more attention to the scientific and technological studies and the wider geographical dispersal of higher education institutions are essential factors for the improvement of higher education through its proper democratization. But democratization which implies renewal calls for still more far-reaching changes in the internal aspects of higher education, in the organizational set-up of the institutions, in the structures and contents of curricula, in the admission policies and procedures, in the language of instruction and in the attitudes towards the research and public service functions of universities. In short, what is needed is a number of interrelated well-integrated measures which can go far enough to affect the real quality of the graduate to ensure that he is technically competent in performing the tasks which will be assigned to him and is, at the same time, conscious of the problems of his society, shares its aspirations and is properly motivated and fully committed to the objectives of national development. This kind of Arab graduate can only be produced by a truly Arab university which is itself dedicated to the objectives of the Arab society, deeply rooted in the Arab cultural heritage and, at the same time,

competent and fully committed to contribute to modernization and progress. How to reconcile and attain these two basic objectives of modernization and preservation of traditional cultural values is a major challenge which faces Arab education generally and higher education in particular. The Director-General of Unesco has expressed his confidence in the possibility of reconciliation in his opening address 'to the Fourth Conference of the Ministers of Education and Ministers Responsible for Planning in the Arab States', held in Abu Dhabi in November 1977:

> '... The Arab World probably more than at any time in its long history is today facing a crucial challenge, namely how to adapt a very ancient society harmoniously to the demands of modern times ... In this process of change, to reach collective autonomy in education as in science and technology the Arab nation has the capacities, the human potential and the material means'.

The role of Arab higher education in the harmonization and reconciliation of the two objectives has been emphasized by the Conference of the Arab Ministers Responsible for Higher Education, held in Algiers in May 1981, in their resolution (II) which called for:

> '... the development of the structure and contents of higher education curricula with the aim of enabling the students to form an objective and comprehensive understanding of the Arab societies, their problems and the basis of their special cultural alienation which results from the present education curricula for inculcating self-confidence and commitment to face the challenges of progress in the framework of authenticity and modernity'.

To succeed in the task of ending the cultural alienation of their students and graduates by inculcating in them confidence in their societies and in their own cultural heritage, Arab universities must begin by freeing themselves from their excessive dependence on Western university models and their ideologies. The twin objectives of modernity and authenticity can be reconciled and realized in the context of Arab society and Arab development if Arab universities cease to identify modernization with Westernization. Arab universities can work together to produce a new graduate who is as competent in the grasp of the basic elements of his subject, in every area of study, as the graduate of the Western universities but who is at the same time knowledgeable about his society and its particular problems and who is more importantly capable of using his knowledge intelligently and selectively to suit the particular local needs and conditions.

To achieve this, Arab universities can design, construct and implement their own curricula. To ensure relevance and effectiveness the starting point in the design, revision and reform of curricula structures and contents must be the nature of the tasks which graduates are to perform, the type of problems which they will face and the basic tools with which they need to be equipped to handle all situations. This calls for close and permanent links between the university and the society and more particularly between the individual academic units and the corresponding areas of graduate employment. Apart from gaining first-hand knowledge to be utilized for teaching purposes and for designing and revising curricula, the students must be directly involved in this link so that they may develop a better understanding of the nature of the practical problems which will face them, to find out for themselves the relevance of what they are taught and accordingly to influence the curricula contents and the methods of teaching. Several innovations have been developed and successfully implemented in many countries, all centred around establishing closer links between universities and practical employment situations. Arab universities can, and must, consider adopting one or more of these new systems and adapt them to suit their particular needs and conditions. Fairly well developed among these systems

is the one which links university teaching and research with real production situations, established within the educational institutions or in collaboration with outside productive establishments. Another system which is rapidly taking root in many developed and developing countries is the 'Study Service' system whereby students are required to undertake a period or several periods of practical community service, in areas which are of some relevance to their fields of specialization, in the course of their study programmes. Apart from enriching the students' knowledge of practical employment experience and their understanding of the nature and types of problems which will face them after completion of their studies, the adoption of a similar system can go a long way in remedying a major weakness in the link between Arab universities and their respective communities, especially in rural areas.

Another weakness in the Arab universities' link with practical employement situations, as mentioned earlier, emanates from the rigidity of their admission regulations and policies which virtually restrict admission to fresh secondary-school graduates with no practical experience. There is need for changing these policies with the aim of changing the profile of their student populations by giving some weight to practical experience and productive skills in the criteria for admission of new students. Such a change should enrich the educational institutions and at the same time appreciably extend the horizon of democratization of higher education in the region. Another innovation which could also benefit Arab higher education is the system of 'lifelong education', which entails some form of permanent relationship between the students (graduates) and their educational institutions, the students returning to their institutions at regular intervals to update and adjust their knowledge while at the same time enriching the institutions with better understanding of the problems which they face in practical employment. The adoption of such a scheme may in certain cases call for some far-reaching changes in the structures and contents of curricula. However, whichever of these innovations are selected and developed by Arab universities, what is really essential is that Arab universities must pay greater attention to the need to end their present isolation from their respective communities and establish closer links with them, so as to ensure that their teaching, research and public service, are of greater relevance and effectiveness.

In the reconstruction of their curricula structures and contents, Arab universities must pay greater attention to their key role in the preservation and revival of Arab cultural heritage. This is not only an essential objective in itself but is also needed as a means of reconciling the two objectives of 'modernity' and 'authenticity', as a means of ending the isolation of the universities from their respective societies and the cultural alienation of their graduates. The cultural heritage of any nation and the Arab cultural heritage in particular, cannot be defined in some precise terms to be dealt with by the introduction of one or few university courses. The Arabo-Islamic culture represents a very rich, extensive and original contribution to human cultural, spiritual and scientific development covering, among others, philosophy, literature, science, religion, arts and architecture. The role of Arab universities in the revival and preservation of Arab cultural heritage must, therefore, go far beyond teaching the history of the glorious past of the Arab nation and Islam. Arab universities should aim at the reorientation of every aspect of their activities towards the realization of comprehensive Arab development on the basis, and within the context, of the revival and renaissance of Arab culture instead of the present confused attempts of transplanting some alien cultures. In this respect, Arab universities have a responsibility for developing a new and fresh expression of the basic Arabo-Islamic values, virtues and ethics, which are capable of stimulating rather than retarding modernization and development and which can at the same time safeguard the Arab society from the pitfalls and problems which are brought about by modern technological developments.

Arab universities cannot naturally achieve much in their efforts to revive and preserve Arab cultural heritage while continuing to neglect the Arabic language which has always been the key factor in Arab unity and Arab development. Apart from its role in the revival of Arab cultural heritage, Arabicization is essential for achieving greater relevance and effectiveness through the localization of curricula contents.

Arab universities must, therefore, speed up the process of Arabicization and its extension to all universities and all areas of studies. As mentioned earlier, the arguments put forward against Arabicization are not any more convincing especially if the key role of Arab universities in the development of national culture and the importance of integrating the universities more fully with the society are appreciated. At the same time many positive factors have developed and are expected to continue favouring and facilitating the use of the Arab language. With the rapid growth of students' enrolments, total numbers of higher education students in the region have come to be counted in terms of millions and in terms of hundreds of thousands in different major areas of studies, thereby creating a sound economic basis for translating and producing all the required textbooks and other reference material in Arabic. On the supply side the numbers of teachers in the region, with the majority of them consisting of Arab nationals, have reached tens of thousands. But the production or translation of essential books should not be left to the free market forces as they tend to be slow and involve much waste through duplication of efforts and also as a proper regional, all-Arab, market for books has not yet developed except in a few limited areas. What is needed, therefore, is a concerted action by all Arab universities linked to an all-Arab plan of progressive Arabicization. Specialized panels of scholars may be set up for every area of study, consisting of representatives of different universities to consider the needs of each area for essential books and periodicals and to arrange for their translation and/or production. Such concerted action can go further to consider and implement means of printing and distribution of such books in all countries at costs which are within the reach of students. If such measures are taken to facilitate the production of essential books in all areas of specialization in Arabic, their impact could go far beyond the advantages of Arabicization in the universities by contributing immensely to the enrichment of the Arabic language and to the general cultural development of the whole region.

The need for higher education teachers

To accomplish all these ambitious tasks of expanding higher education and radically changing its structures, contents and orientation, the most crucial factor is certainly the availability of sufficient numbers of adequately qualified, properly motivated and committed teaching staff. According to the present projections, the total number of higher education teachers, for the whole region, is estimated to reach 344,000 by the year 2000 on the basis of a student/staff ratio of 18. This is a too-high ratio for enabling higher education to improve its quality to any significant level. A ratio of 15 would still not be ideal but should be set as the minimum target if higher education is not to be bogged down to quantitative growth only. A ratio of 15, with the same level of student enrolment projections, would require a total staff of 413,000 by the year 2000. The net increase in the number of staff would therefore be, in the coming two decades, either 195,000 or 264,000 depending on which of the two ratios is adopted. There is, furthermore, the possibility that under stronger pressures of student demand and/or manpower needs, higher education may be led to expand enrolments beyond the projected 6.2 million by the year 2000. However, even if this does not materialize, the task of providing 195,000 or 264,000 additional higher education teachers at the average annual rate of 10,000 or 13,000, in addition to replacements, is by all standards a formidable task. The fulfilment of this task will be further complicated by the need to change the distribution of students in favour of the scientific and technological areas of studies where Arab universities already experience acute staff shortages. Another factor which may slow down the provision of the additional staff is the practice of Arab universities of restricting selection for their staff development programmes to a very small proportion of their graduates, and requiring them to undergo postgraduate training lasting 5-7 years.

Relaxation of the stringent criteria for appointment to university teaching posts and the introduction of some measure of flexibility by seeking persons with varied practical experience can certainly ease the problem and at the same time enrich the quality of university teachers. But Arab universities are not likely to relax their appointment rules to any significant extent. The failure to train the required numbers will, therefore, certainly slow down, or totally halt, efforts to improve the quality of higher education, and may even lead to further deterioration. As experience has shown that expansion of student enrolment cannot be easily checked, student/staff ratio may be allowed to rise, the ratio between science-based and other study areas may not be improved and may even decline, more reliance on non-Arab expatriate staff may hinder localization of curricula and Arabicization of instruction. Universities of the low- and middle-income groups of countries may continue to lose their best staff to the higher income group countries with the consequence of further lowering of their standards.

A problem of such dimensions and serious risks to the future of Arab higher education certainly calls for measures at the national and regional levels to ensure that the required numbers of teachers are trained and retained by higher education. All individual institutions can immediately step up their staff development programmes within the framework of national and regional staff development programmes. The important role of the regional programme would be to ensure that the sum total of national targets are sufficient to meet the projected regional needs in every area of specialization. It is implied here that some individual Arab countries may have the capability to train more qualified persons than their expected needs while others may not be in a position to train sufficient numbers for their needs. This would call for financial support from some regional sources to countries which are willing to produce more than their needs. The financial support may take the form of direct subsidies to the deserving national staff development programmes or may take the form of a 'regional scholarship programme' to support postgraduate training of suitably qualified Arab nationals in specific priority areas within or outside the region.

But for obvious educational as well as financial reasons, the present excessive reliance on foreign universities for the postgraduate training of future higher education teachers must be changed. The help of foreign universities may continue in new areas of narrow specializations and in other areas for which reasonable adequate facilities have not yet developed in Arab universities. But the bulk of the future needs of the region can, with some efforts, be provided by Arab universities. The implementation of the often-proposed idea of setting up specialized 'regional centres for research' can make useful contributions by combining postgraduate training with research. It is envisaged that individual Arab countries with fairly well-developed universities may be selected as locations for one of the 'Regional Centres for Research and Advanced Studies' in areas of specialization of direct relevance to the selected country, and accordingly to be provided by required resources in terms of equipment, funds and staff.

Another area of significance to the provision of the required number of teachers and their retention by the region and by the higher education system is the question of terms of remuneration and other conditions of employment. While it is true that the serious 'brain drain' from the region is not merely due to financial considerations, these certainly represent a major factor. The seriousness of this problem has caught the attention of the Conference of Arab Ministers of Education and Planning held in November 1977, which recognized that the brain drain was caused by 'a variety of economic, political and social factors' and in their Recommendation 15 called for:

> '...effective remedial lines of action for stemming the brain drain as a first step and for bringing qualified Arab personnel back to the Arab world, whenever possible, through the creation of favourable conditions that would help achieve this purpose'.

However, the loss of qualified staff to countries outside the region is only one aspect of the problem. As mentioned before there is the indiscriminate loss of staff by the poorer countries of the region. There is also the fact that Arab higher education continuously loses experienced staff to other sectors of employment within the individual countries and within the region. This was also recognized by the same Conference which in their Recommendation 16 called all Arab states:

> '...to pay special attention to the teaching profession by providing both moral and material incentives in order to attract and regain highly qualified personnel, in particular through the development of equitable salary scales commensurate with the levels of training as a means of enhancing professional specialization of relevance to development plans'.

However, even if this leads to the required adjustments within individual Arab countries the much more difficult problem of disparity in terms of employment among different countries of the region will remain. While all sectors of employment of skilled personnel are affected by these disparities, higher education suffers most because of the acute shortage of qualified teachers and the greater mobility of higher education personnel. It is difficult to see how this problem can be dealt with effectively while the considerable disparity in the levels of economic development continues. However, the success of the efforts to increase the numbers of qualified staff to overcome the shortages at both the regional level and the national level can contribute a great deal towards easing the problem, and consequently narrow the wide gaps in remuneration among individual countries. But the problem of loss to countries outside the region and to other sectors of employment will remain unless substantial improvements in the levels of remuneration are implemented in all countries and the quality and general atmosphere of Arab higher education is improved.

Other university functions

It is commonly agreed that to be really effective, universities must combine teaching, both undergraduate and postgraduate, with research and public service. The three functions are not separable but are interrelated and interdependent, each function supporting and strengthening the other two. But as mentioned earlier, Arab universities do not pay sufficient attention to research or public service due to their preoccupation with undergraduate teaching. This does not mean that research is totally neglected as it is stipulated by all universities as a major requirement for staff promotion. Indeed, some Arab universities have made significant contributions to the enrichment of the Arabic library in such fields as Arabic language, literature, Islamic studies and philosophy. Research is also undertaken in the social sciences and in the scientific and technological studies but is generally of less relevance to the immediate needs of the society and is insufficient. On the whole the contribution of Arab universities is considered to be far below the needs of society and the capabilities of Arab universities.

The need for more research in all countries of the region has been intensified by the rapid pace of economic growth of the past two decades, the consequent changes in the socio-economic conditions and the social, cultural and environmental problems which have emerged. The creation of non-university research institutions will be essential if all national and regional research needs are to be properly satisfied, especially in the more specialized and more directly applicable fields of research. The setting up of these institutions which may, themselves, heavily draw on the resources of the universities, will not in any way lessen the importance of the universities' research or limit its scope. Arab universities will, therefore, be required to intensify their research activities substantially and change its orientation to development issues. Universities are particularly more suited to undertake more independent impartial examination of the past course of development in all its aspects including its general direction, its sectoral structure as well

as its technological choices, its accomplishments as well as its failings. Universities are also more capable of undertaking multidisciplinary research which is more appropriate for a meaningful evaluation of past experiences and consequently for influencing the shape of future comprehensive development strategies.

The need to involve Arab universities in development-oriented research has been emphasized by the Conference of Arab Ministers of Higher Education in May 1981, in a resolution calling:

> '...Arab universities and research institutions to participate and co-operate effectively in the laying down and implementation of short-term and long-term scientific policies dealing with the problems facing Arab development, with special emphasis on such priority areas as solar energy, desertification, marine resources, problems of agriculture and food security, and the direction of Arab development and its resources in the post-petroleum era...with special attention to scientific studies in the area of local tradition and folklore as well as conventional natural resources and their utilization in local development'.

Singling out these areas of research is naturally meant to illustrate the importance of intensifying research and directing it towards finding scientific solutions for the urgent problems of the Arab society and particularly those which have direct bearing on development. It is also significant that the Conference has called upon Arab universities to participate effectively in the planning and implementation of national research needs. To respond to this call, Arab universities must find it necessary to change their present liberal practices of leaving their research activities to the initiative and personal interests of individual staff members. The new tasks would certainly call for the creation of some more active research organs which are competent to plan, co-ordinate and stimulate the university's research contribution to national needs, instead of the present passive research committees which merely allocate research funds among individual applicants. The greater attention which must be devoted to the general as well as to the specific issues of national and regional development would call for extensive multidisciplinary research and 'team' research. Individual research projects must naturally continue to occupy a significant place, if only to satisfy the legitimate interests and rights of individual staff members, but the new university research organs can influence the preferences of these individuals and direct them towards types which are directly or indirectly relevant to the national needs or the needs of the universities themselves.

One area of research which is of great importance to national and regional development and which is, at the same time, of direct relevance to the Arab universities themselves is educational research. Universities can contribute immensely to the development and improvement of the quality of education by carrying out research in all aspects of the education system in all its levels and types including improvements in the contents and methods of teaching of all secondary-school subjects. With the higher education system itself growing into a sector of major importance, and still suffering from many serious weaknesses, university research in all areas of higher education must make useful contributions towards improving the efficiency of the system and upgrading its general standards.

As for the public service function of Arab universities there is scarcely any limit to the areas of this sphere of activities in which universities can make some useful contributions. It is because of this very fact that Arab universities, while fully realizing the great need for their involvement in direct service to the community, must carefully plan their activities. This must be based on a proper understanding of the nature and dimensions of those problems which have direct bearing on the welfare and development of the society, and which can be effectively dealt with by the universities. A definite priority area must be the university's own

graduates, who could be brought back to the university at regular intervals for short 'refresher courses'. These courses could be designed so as to bring the graduates up to date with developments in their areas of specialization and to provide a useful forum for discussing the particular problems which face the graduates in performing their tasks which, in turn, could help the university in its endeavours to improve its curricula and teaching methods. Another priority area which is of great importance to the society and to the universities, is the contribution universities can make towards the development and improvement of the general education system and the secondary-school level in particular. Refresher courses can be organized for secondary-school teachers in all school subjects especially in areas which are identified as areas of weakness. Other shorter training courses could be devised for 'education administrators', 'adult education trainers' and for organizers of other forms of non-formal education. Other areas of relevance to development may extend to courses of varying lengths in 'Public Administration', 'Planning Techniques', 'Business Management', 'Social Work', 'Accountancy', 'Preventive Medicine', Agricultural Extension', etc.

Another important issue which has retained attention in recent years, both inside and outside the academic world, is concerned with the formulae combining learning research and production in the institutions of higher learning because of their educational and social value, both in terms of preparation for life and employment, on the one hand, and for the social and ethical value, on the other. The problem lies with the choice of patterns for combining teaching, research and productive activities in the process of education and training both in terms of time sequences with a mix of the three components within each year or period of studies, or through alternate periods and in terms of distribution between education in higher education institutions and training in the productive sector.

However, the performance of the public service function must not be confined to the university campus, but must involve members of the university community consisting of staff and students going out, to both urban and rural areas, to provide direct service as only such direct contact can enrich the universities with first-hand knowledge of the prolems, feelings and general conditions of the society.

In addition, universities can utilize the national and regional communication media of radio and television to reach a much wider audience. Through this relatively cheap method, the universities can organize many useful training, educational and cultural courses. This could be developed to support organized 'correspondence courses' in a wide range of areas which may eventually cover full university degree courses.

Regional and international co-operation

Regional co-operation has not yet developed as a forceful organized system among the national systems of higher education for a number of factors which have been elaborated in Section II. But in spite of these negative factors, the powerful pressures of students' demand and high-level manpower needs have led to some interesting form of complementarity among the national systems, which is probably greater than in any other area of the social or economic sectors. Tens of thousands of Arab students from almost all countries of the region, who are denied admission to their own national institutions of higher education, move across national frontiers seeking and obtaining admission to their chosen fields of studies. Likewise, several thousands of Arab higher education graduates also move across national frontiers to fill existing gaps in manpower needs. The movement of thousands of higher education teachers and other support staff is even more significant in so far as it contributes much to the development of higher education in the region as a whole.

But these developments, while confirming and further consolidating the already powerful unifying forces which bind together the countries of the region, do not in any way lessen the need for more organized forms of regional co-operation. Indeed, the advantages of these exchanges of higher education teachers, graduates and students could be appreciably increased if they were themselves organized in the framework of a regional higher education strategy and with the aim of removing some of their negative effects. As mentioned earlier the movements of certain skills which are in short supply in the region as a whole, including certain specializations of higher education teachers, have been damaging to the less developed countries and as such have tended to accentuate the already existing disparity in economic, social and cultural development of the countries of the region. Competition among countries in these areas of skill is harmful to all countries and, as such, cannot contribute to the overall Arab development. The correct remedy is for all countries to co-operate closely to ensure that the Arab higher education system as a whole is set on the right course for producing the required numbers with the required qualities and the right attitudes.

Apart from the need to organize co-operation in the field of exchange of students, graduates and teachers, the most crucial and urgent issue for the future of Arab higher education which calls for organized co-operation is the problem of training sufficient numbers of qualified higher education teachers. As suggested earlier this task can be conveniently combined with the realization of the two important objectives of upgrading research activities in the region and the development of postgraduate studies, through the creation of several specialized regional 'Research and Advanced Studies Centres' in different countries of the region. Although these centres could be more conveniently located in already existing and well-developed universities, they cannot be left completely to the initiative of these national institutions, but must be linked together and generally guided and supervised by a regional body which has sufficient academic, financial and administrative authority to ensure that their activities are co-ordinated and that they are functioning properly and fulfilling the aims for which they are established. These centres may eventually form together the nucleus of one, or more, regional universities of advanced studies with active branches spread throughout the region.

The need for organized forms of co-operation will be further strengthened by the need to finance the staff development programmes of those countries which are required to train more staff than their projected needs, as well as for the financing and administration of the proposed 'regional postgraduate scholarship programme'. The question of financing would assume much greater importance in regional co-operation if, as it must be, extended to support the less fortunate Arab countries to catch up with other countries of the region in the development of their education systems including higher education.

This seems to have received the support of all countries of the region, as has been indicated by Resolution (43) of the Conference of the Arab Ministers of Education and Planning in November 1977 which called for:

> '...A comprehensive study on the setting up of a joint Arab fund for the financing of education in the Arab countries on the basis of co-operation and integration so that all Arab states may collectively contribute to the eliminating of the main obstacle to development, namely ignorance'.

The same Conference went further in its Recommendation 44 by recommending:

> '...that the Arab states adopt the principle of inter-Arab educational financing and inter-Arab employment, that ALECSO draw up a clearly conceived formula for the implementation of this principle, and that the Arab states, each according to its human and material resources take necessary action at the bilateral and regional levels'.

As seen earlier the idea that education development should become a regional responsibility so that all countries and all resources of the region can participate fully in the complementary development of the whole region, has also received the endorsement of the Arab Summit Meeting held in November 1980. Education, training and the acquisition of technological capability have been accorded the highest priorities in the 'Strategy for Joint Arab Economic Action'. Regional co-operation to be really effective, cannot, and must not, be confined to these areas which require financing. These must form part of a wider regional strategy for improving the quality of education in all its levels and aspects. For the higher education level, the new strategy must aim at co-ordinating its basic structural features in terms of the distribution of student enrolments among different levels of higher education studies and different areas of specialization, so that within each country these areas of specialization are, as much as possible, balanced with its own structures of manpower needs.

Deficiencies which may inevitably exist in some countries in certain types or levels of skills, can be offset by contributions from other countries or from specialized regional educational and training centres. The new strategy must naturally be concerned with the crucial issue of the democratization of higher education at both the national and regional levels to ensure wider opportunities of access as well as ensuring its renewal, continuous improvement and relevance to the needs of national and regional development. Perhaps the most profound contribution a well-integrated and rejuvenated Arab higher education system can make to the future of the Arab nation is the development of a new Arab university model where the Arabic language occupies its rightful place and which brings together in harmony the two objectives of modernity and the Arabo-Islamic cultural identity.

To attain these ambitious, but very basic and essential levels of regional co-operation, some new form of regional organization may prove to be essential to function within the framework of ALECSO. The periodic meetings of the Ministers of Education and of Ministers responsible for scientific policy organized by Unesco and other similar meetings organized by ALECSO are very useful and constructive as they take stock of past developments, reveal the existing weaknesses and shortcomings and pave the way for future improvements. These meetings can decide the type of machinery needed to co-ordinate, integrate and improve regional higher education and influence its operation and contribution. The Association of Arab Universities, which has so far functioned as a useful forum for the exchange of ideas, is not competent to discharge the new responsibilities but can make useful contributions in a more or less consultative capacity.

The development of regional co-operation and integration does not preclude or in any way lessen the importance of international co-operation. Indeed, the rapid increase in numbers of students, teachers and other personnel, the development of new areas of specialization, and new areas of advanced studies, the upgrading of research activities and the need to continuously revise and renew curricula, make international co-operation even more essential than in the past.
Closer links with all higher education systems of the advanced countries does not any more need to take the form of complete dependence and adherence to their university models but, nevertheless, must continue to be very close. Useful forms of co-operation with all other countries and regions, developed as well as developing, can be very helpful in the area of exchange of staff and students, and particularly postgraduate students who can undertake part of their higher studies and research profitably in other countries. Exchange of postdoctorate fellowships for the teaching staff can also be very beneficial, especially for those who complete all their studies within the Arab region, so as to acquaint them more closely with other university systems and other cultures. At the multilateral level co-operation with the rest of the world is maintained through various international institutions

and particularly Unesco, who has special responsibilities in ensuring international co-operation in the fields of education, science and culture, and accordingly brings closer to the Arab higher education system the experience of other countries and regions and generally provides useful ideas and assistance for the development and improvement of Arab higher education.

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